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ADMINISTRATIVE HISTORY

CRATER LAKE NATIONAL PARK
Oregon

VOLUME II OF II

by
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U.S. Department of the Interior / National Park Service

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CHAPTER ELEVEN

RANGER ACTIVITIES IN CRATER LAKE NATIONAL PARK: 1916-PRESENT

The ranger force at Crater Lake National Park consisted of a small staff during the early years under National Park Service administration. In 1917 Superintendent Sparrow reported that the ranger force "consists of one permanent first-class ranger and three rangers for the months of July, August, and September." The principal duties of the rangers were enforcement of park regulations, protection of its resources, prevention and control of forest fires, and operation of the park entrance stations. Two rustic log ranger cabins were constructed in 1917 at the east and west entrances of the park to complement the existing cabin at the south entrance.[1]

The Crater Lake ranger force expanded in 1918 and 1919. One permanent year-round ranger was stationed at headquarters. In addition three temporary rangers were assigned to mounted patrol during the summer months and three were employed at the checking stations at the park entrances.[2]

The ranger force and its attendent responsibilities at Crater Lake grew slowly during the 1920s. Superintendent Sparrow reported in 1920 that during the tourist season

> the regular force consisted of one superintendent, one clerk and seven temporary rangers. Three rangers were stationed at the East, West and South Entrances, one at Anna Spring, one at Government Camp and two on patrol, fire protection and trails.[3]

As visitation to the park increased the number of temporary park rangers was expanded. In 1924, for instance, the ranger force was increased to nine seasonal rangers under the direction of the permanent ranger employed at park headquarters.[4]

Despite the growth of the ranger force the responsibilities placed on them led to calls for more rangers. In 1926 Superintendent Thomson reported that an "insufficient ranger force prevents adequate protection of this 249 square miles of mountainous territory." The duties of the rangers, which stretched manpower too thin, consisted of (1) enforcing park regulations; (2) protecting wildlife; (3) patroling roads and campgrounds; (4) stocking the lake with fish; (5) aiding visitors; (6) preventing and controlling forest fires; (7) participating in forest insect control; (8) travel entrance checking and information; (9) compiling travel statistics; and (10) handling the park communication system.[5]

In 1928 Superintendent Thomson again stressed the inadequacy of the park ranger force. He observed:

> Park protection was inadequate due to limited ranger personnel. One ranger and eight temporary rangers hired only for the travel season can not possibly protect an area of 249 square miles, particularly as their energies are almost entirely consumed in handling well over 100,000 visitors who enter through five stations and circulate over a road system of 67 miles. Ranger personnel is so inadequate that we don't know what goes on in the Park except upon the roads. There is no patrolling [sic], no reconnoisance [sic], no protection against poaching.[6]

In response to such complaints the ranger force was expanded during the next several years. By 1929 the force consisted of ten seasonals under Chief Ranger W.C. Godfrey. That year the checking stations at the west and south entrances were consolidated into one station at Anna Spring, thus requiring only four rangers to handle traffic checking compared to six in previous years.[7]

In 1930 a Park Service report examined the ranger organization and its primary duties. Among other things the document stated:

> The ranger force constitutes the protection organization of the park. The Chief Ranger is the only year long member of this force. During the park season there are ten temporary rangers

> employed, including the checkers and information rangers. One of these men is already assigned to patrol along the roads and policing of camp grounds, but cannot cover all the territory that is essential. One additional patrolman is needed, in order that all the roads from the west, south and east entrances, as well as the road around the Rim, may be patrolled each day and all camps visited. . . .
>
> It is fortunate that both the Superintendent and the Chief Ranger are experienced in fire suppression work. It is desirable also that the temporary rangers be given a two or three day training course in protection work at the beginning of their appointments. The key men in the road and trail crews and construction foreman should also be included in this school so that they will be prepared to act as crew leaders for their men in case they are called into service as fire fighters.[8]

Tragedy struck the park staff on November 17, 1930, when Chief Ranger Godfrey was found dead in the park as a result of exposure to the cold. David H. Canfield, a native of Minneapolis, Minnesota, and a graduate of the University of Minnesota, was named the new chief ranger. He took up his duties at Crater Lake in May 1931, having been transferred from Mesa Verde National Park by NPS Director Albright.[9]

During the early 1930s the Depression had a major impact on the park ranger staff. In 1933, for instance, the force consisted of Chief Ranger Canfield, permanent rangers Don C. Fisher and Charles H. Simon, twelve seasonals, and two temporary fire guards.[10] (See the following page for the backgrounds of 8 of the 12 seasonal rangers.) Two years later, however, Canfield, who had become superintendent, reported on the problems occasioned by personnel cutbacks:

> Due to the lack of permanent rangers--there being only one and he was unable to devote the time, this park again fell behind the vanguard during this period of emergency monies when most parks are making great strides.
>
> Chief Ranger [J. Carlisle] Crouch was transferred to this park from Mesa Verde late in the spring; but for several months he has been the only permanent member of the ranger force. In order to approach adequate protection of the park and to provide service to visitors it is imperative that additional rangers be authorized in the near future.[11]

BACKGROUNDS OF EIGHT SEASONAL RANGERS

1933

RUSSELL P. ANDRES--Instructor in English, at Klamath Falls Junior high school, has been with the park for the past two years as a seasonal ranger. Graduate of Stanford, having his B.A. and M.A. degrees.

GEORGE P. BARRON--Ashland, is a graduate of the school of music at the University of Oregon, and has been engaged as instructor in that department for two years. He has been in the park for the last four summers, and is pianist for the community house programs.

FERDIE A. HUBBARD--Trail, a temporary ranger for many years.

BERNARD B. HUGHES--Medford, with park the past three summers.

WALTER E. NITZEL--Medford, teacher local Junior High school, and with park several seasons.

BREYNTON R. FINCH--Medford, principal local junior high school.

MILTON E. COE--Medford, principal of Jacksonville schools.

DWIGHT A. FRENCH--Klamath Falls, athletic coach and teacher of biology, Union high school there.

Medford Mail Tribune, June 8, 1933, Steel Scrapbooks, Crater Lake, No. 41, Vol. 9, Museum Collection, Crater Lake National Park.

4

With increasing park appropriations the ranger force was expanded in 1936. Two permanent rangers, Wilfrid T. Frost of California and George W. Fry of Pennsylvania, joined the park staff, thus filling "a long felt need." As a result of those appointments Superintendent Canfield observed that the ranger organization was "in a position to function more efficiently, particularly after the new men are entirely acclimated, accustomed and broken into their duties." The temporary force, according to Canfield, continued "to be filled by outstandingly able men."[12]

Several accidental deaths in the park during the mid-1930s led to increased emphasis by park rangers on visitor safety, protection, and rescue operations and more rigid enforcement of park regulations. The first recorded death by drowning in Crater Lake occurred on August 31, 1935. Arthur Silva, while fishing with Melvin Simon, both of Hayward, California, lost his life when their boat capsized, the result of both men standing up and turning in the boat thus throwing all the weight on one side. The drowning, which took place near Wizard Island, was witnessed by the lookout on Watchman Peak, but it took more than an hour to recover the body.

Two deaths as a result of falls over the crater rim in 1936 and 1937 focused attention on the need for visitor protection services by park rangers. In 1937 Superintendent Canfield devoted attention to this issue in his annual report:

> Two deaths by falls over the crater rim were recorded during the year. July 20, 1936, Warren Bowden, 19, Portsmouth, Virginia, was killed while attempting to climb down the crater wall near the Sinnott Memorial in violation of park regulations. He had progressed several hundred feet downward when he slipped and plunged to his death. . . .
>
> May 31, 1937, Erma Fraley, 17, Medford, Oregon, was killed in almost the same spot as the tragedy of the previous July. She was walking on snow inside the rim against the rules of better judgment and in violation of park regulations. In her spirit of daring, she suddenly slipped and rolled and plunged to within 80 feet of the lake shore. Her body was badly broken. Park

> rangers, accompanied by CCC enrollees, risked life and limb by climbing down a long slide over trecherous snow to reach the body. A rowboat was also lowered from the rim to enable the party to row a half-mile to the girl. The body was carried up a thousand feet of the slide and then attached to a cable and hoist to pull it up the remaining distance.
>
> Dozens of warnings were given during the year to visitors venturing over the crater wall and several rescues were made. Venturesome visitors climbed down the wall or up from the water and became trapped so that they could not return or proceed. While there were more people at the beginning of the 1937 summer, there seemed to be less foolhardy disregard for park regulations than the year before.[13]

As a result of keeping the park officially open on a year-round basis beginning during the winter of 1935-36 there was a need for ranger personnel in the park during the winter months. After several years of covering the winter period with temporary personnel, funding permitted appointment of two permanent rangers during the winter of 1938-39. In addition the chief ranger traveled to the park from Klamath Falls on days of expected heavy travel. Nevertheless, Superintendent Leavitt reported that the winter ranger staff was "not adequate to handle checking, road patrols, trail and boundary patrols and numerous emergency calls." He further stated:

> . . . On week-ends of heavy travel of skiers, it was necessary to accept the volunteer services of members of ski clubs to patrol ski trails, and to call on the assistance of ranger personnel from the Lava Beds. The entire ranger staff were able to apply on numerous occasions the Red Cross First Aid training which they received during the fall and early winter months, several serious accidents and numerous minor accidents occurring among the skiers.[14]

By the late 1930s park administrators had determined that a park ranger training school was needed at Crater Lake to promote and develop the professionalism, efficiency, and effectiveness of the force. The two men responsible for the idea of the school were Superintendent Leavitt and Chief Ranger J. Carlisle Crouch. Thus, the first such school was held at the park during July 5-20, 1938. Various instructors were brought to the park to share the expertise of their disciplines. These included: William Howland, Superintendent of the Klamath Hatchery; Conrad Wessela, Associate Forester of the Bureau of Entomology and Plant Quarantine, Division of Plant Disease Control; and J.D. Swenson, Special Agent in Charge of the Portland Office of the Bureau of Investigation. Among the subjects covered at the school were:

History of the National Park Service
History of Crater Lake National Park
Park Organization
Ranger Organization
Checking Stations
Police Protection
First Aid
Forest Fire Protection
Fire Tools
Forest Insect Protection
Forest Disease Protection
Building Fire Protection
Fish Planting
Special Protection

The success of the school led to its becoming an annual event in the park for all rangers, ranger-naturalists, and fire control aids.[15]

In conjunction with the training school Chief Ranger Crouch prepared a "Crater Lake Ranger Manual." The manual was designed to serve as a reference guide for the park rangers in carrying out their responsibilities. According to the manual, the ranger force was established to ensure that the park was administered in line with the NPS policies. In the introductory portion of the manual Crouch observed:

> Some physical developments were, of course, required to carry out the . . . principle[s] of park administration. Such improvements are undertaken and accomplished with a minimum disturbance to the natural appearance of the park. Unnecessary scarring of the landscape; destruction and injury of trees and plants in the course of construction activities; establishment of promiscuous footpaths, and explanation of rules and regulations in terms of park policies are all important for the rangers to keep constantly in mind. . . .

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> The Park Ranger Organization is predicated upon the broad principles of the National Park Service. In the final analysis, administration of the park, enjoyment of the park by visitors, and in fact all park activities presuppose an adequate and effective plan and execution of protection measures.
>
> The phrases "maintain in absolutely unimpaired form" and "use, observation, health and pleasure of the people" infer a multitude of diversified activities. In the preparation of a manual of operation for the ranger organization it must be acknowledged that each detail of assignments, a ready and stereotyped answer to all inquiries, and a solution for each bewildering situation cannot be included. Reliance must be made upon your own initiative, intelligence and discriminating deductions. Rangers are far more than the "eyes and ears" of the Superintendent. You must interpret correctly and analyze carefully what you see and hear.

According to the manual the Crater Lake ranger force consisted of twenty persons. These included:

1	Chief Park Ranger
2	Permanent Park Rangers
13	Seasonal Rangers
3	Fire Guards
1	Fire Lookout

The living arrangements of the rangers, as outlined in the manual, provide an interesting commentary on what it was like to reside in the park. Unmarried rangers assigned to headquarters duty or who worked from headquarters were housed in the Ranger Dormitory. Married rangers assigned to duty at headquarters were furnished "insofar as possible, tent accommodations." Married rangers assigned to outlying stations occupied the furnished quarters, while single rangers assigned to such stations were provided with tent quarters. The park furnished a bed, mattress, chest of drawers, and bath facilities for $5.00 per month. Meals were to be obtained at the government dining room "at approved rates, usually at a cost of about $1.20 a day."

The majority of the manual was devoted to a detailed explanation of the duties and responsibilities of rangers. These duties were outlined under the following categories:

Checking Station
Forest Protection
Public Contacts
Public Campgrounds
Headquarters Assignment
Traffic and Highway
Police Protection
Winter Activities
Wildlife Activities
General and Special Patrols[16]

Increasing visitation, more extensive diversified use, and year-round operation of the park created added demands on the ranger force at Crater Lake. In January 1940 Chief Ranger Crouch prepared a report on "Ranger Protection Requirements" for the park and made recommendations for increasing the efficiency of the ranger force.

The first issue to be addressed in the report was that of "protection facilities." At the time the only ranger station in the park was located at park headquarters. In addition there were three "entrance" or "checking" stations--Annie Spring (11 miles from south boundary and 7 miles from west boundary); North (6 miles from north boundary); and Lost Creek (3½ miles from east boundary). Operations at these stations included fee collection, visitor registration, gun sealing, checking in and out of deer killed outside of the park, regulations with respect to dogs and cats, truck weights and sizes and their control, and information services.

To streamline and strengthen protection operations at the entrance stations Crouch recommended establishment of ranger checking stations at each of the four park boundary entrances. He stated further:

> The checking kiosk itself, it is believed, should constitute a separate unit from the station. The stations should consist of quarters for personnel, storage space for equipment and supplies, a garage for a government vehicle and a small work shop. It is not within the scope of this report to offer a design for the quarters and other buildings, but the suggestion is made that the quarters consist, in addition to standard units of living room, kitchen, bath, etc., an attached dormitory room or "bull pen" sufficiently spacious to accommodate the single men who may be assigned to the station and with separate bath facilities, thus eliminating the necessity for temporary quarters.

Crouch recommended that campgrounds be established near the projected ranger stations since campgrounds "located in close proximity to a station and handled by personnel of that station are operated far more efficiently and are used far more considerately than those located at some isolated site." In addition campgrounds near the park boundries could be used by park visitors several months longer than the existing ones at the Rim, Annie Spring, and Cold Spring which often could not be opened until mid-June or early July because of snow.

Winter access to the park, according to Crouch, added increasing year-round responsibilities to the park ranger force. Control of snow sports and the participants themselves made it necessary to hire more rangers. According to Crouch, the "size and number of snow sports areas consistent with the use must be controlled as must the ski trails, snow fields, cross country trips, and the actions of people anywhere near the rim of the lake, on the highways and elsewhere." Aid to injured persons as a result of snow sports activities also was a major component of the rangers' duties.

Crouch strongly recommended that a permanent ranger station be built at Rim Village (a temporary station had been in use at the rim) since it was "the destination of the majority of visitors to the park and the tremendous concentration of visitors in this relatively limited area calls for definite regulatory and protection activities." The recommended permanent central ranger station would "serve as a clearing house for the

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multiplicity of protection work required"--parking, traffic control and regulation, information and campground services, police protection, and emergency first aid.

Competent ranger personnel were necessary, according to Crouch, for exclusive service on the lake and around its shores. The majority of fatal or serious accidents in the park occurred on the lake or in the crater, including drowning, recovery of bodies of individuals who fell into the crater, rescues of marooned persons, and search for lost persons. Protection of the forest cover in the crater and on Wizard Island from fire and other destructive elements should be provided as well as enforcement of fishing and marine regulations. Thus, a patrol boat was needed to provide park rangers with the necessary means to carry out their duties on the lake.

Crouch urged that three ranger districts be established in the park as a means of making the ranger organization more effective. The three districts would include the northern and southern sections of the park and the middle portion consisting of the park headquarters, rim, and lake areas. He observed:

> Operating from the central office at Park Headquarters offers certain and obvious disadvantages. Unnecessarily long trips, lost time and expenses result in the centralized operation. To send rangers from headquarters to outlying sections of the park to handle any work is obviously not as quick and therefore not as efficient as having men stationed in these sections where they would be closer to the work and equally as familiar with it or perhaps more so than the ones from headquarters. The establishment and operation of districts would lessen the present need for so much direct supervision from headquarters and would allow more time for planning and general supervision. . . .
>
> The North and South Districts would include 112.76 square miles or 72,166.40 acres each. Each district would include two checking stations, two camp grounds, one CCC camp and one or more contractors' camps. Each district would contain approximately [illegible] miles of primary highway and 70 miles of administration and protection motorways. The Headquarters District, on the other hand, would contain approximately 25

> square miles or 16,000 acres, 20 square miles or 12,800 acres of which represent the water surface of Crater Lake. What this district lacks in the way of extensive area, it more than makes up in the concentration of use and extensive developments. It would include the Chief Ranger's office, the main fire equipment cache and fire dispatcher's office, administration buildings, employees' quarters, utility buildings, the Rim Area, the Rim camp ground, the Lodge, Cafeteria and overnight cabins of the operator, Crater Lake itself and its crater and the park's two primary fire lookouts.
>
> The District Rangers would be directly responsible for protection work in the respective areas with general work plans and general supervision and coordination originating at the Headquarters Station. The volume of protection work consisting of forest protection, building fire protection, traffic and highway control and patrol, wildlife protection, checking station operations and information service, camp ground management, police protection, etc. is practically evenly divided between districts.

The Crouch report analyzed the need for additional ranger personnel in the park. The ranger force should consist of the chief ranger, and an assistant chief ranger who would handle the headquarters district during the summer and supervise ranger activities throughout the park in the winter when the chief ranger was stationed at Klamath Falls. Two permanent park rangers were needed to supervise forest protection and visitor use activities in the park. The ranger in charge of forest protection would be responsible for:

> preparation and revision of plans, the Fire Atlas, reports and records; training schools for fire protection; dispatching; care and accountability for fire tools and equipment; fire studies and fire reviews; forest insect and tree disease operations, including annual inspections, reports and control measures; fire hazard reduction; wood utilization and right-of-way clearing; maintenance and supply of primary and secondary fire lookouts; fire prevention and fire suppression.

The ranger responsible for visitor services would have the following duties:

> checking station operations; camp ground services; police protection, including cooperation with outside police agencies; all work connected with traffic and highway use; automobile accidents, first aid, emergency rescues and other emergency services; building fire protection, inspection of buildings for hazardous conditions, training and supervision of the Fire Brigade; care and accountability for ranger equipment other than that for forest fire protection; preparation and revision of manuals and work plans, including the Ranger Manual.

The ranger organization, according to Crouch, also needed two seasonal district rangers (north and south districts) and eleven seasonal rangers.[17]

In response to the report NPS Director Arno B. Cammerer urged Superintendent Leavitt to initiate action toward the realization of Crouch's recommendations. The five areas that he particularly supported were:

1. Checking Stations at the park boundaries
2. Establishment of three ranger districts
3. Training school for rangers
4. Additional permanent ranger personnel
5. New engine for patrol boat[18]

During the summer of 1940 Suprintendent Leavitt reported on the responsibilities and accomplishments of the ranger service. One permanent park ranger position was added to the staff in December 1939. Thirteen seasonal rangers augmented the permanent force during the summer. In addition two fire guards and two fire lookouts functioned under the supervision of the chief ranger during the summer. Leavitt noted that the ranger organization was functioning "smoothly and effectively" in spite of "very serious handicaps, due largely to an inadequate number of permanent positions." Appreciation and use of the ranger organization thus justified "a continuation of the expanded service and program."

Leavitt devoted considerable attention to the added responsibilities placed on the rangers by the winter use of the park. He noted:

> The winter use of the park counts considerably more than mere wintertime travel, for this is a most concentrated and specialized use. The total travel to the park during the winter months might appear more or less immaterial as compared to the travel during the summer. The use of the park by visitors in the winter and the specialized service it requires by the park staff, however, goes a long way to counteract the greater numbers of travelers during the summer who are handled with less proportionate park force and greater ease. By way of example, the ranger's relation with a summer visitor might be confined to one contact at the entrance stations and possibly at the Rim; this is not the case with the same visitor in the winter. This visitor must receive close attention from the time he enters the park until he finally departs; his car will move over icy, snow-banked highways; it will probably be parked 10 times to the one time for the summer visitor.
>
> The winter visitor uses the highway between Park Headquarters and the Rim to ride up to the Rim so that he might ski down; the summer visitor rides up the same hill to see Crater Lake and is away and out of the park in a comparatively short time. All protection work in the winter with respect to the use by visitors is comparable to that illustrated by the car parking example. Safety, sanitation, first aid, information, guidance, instruction, etc. are required to a marked degree for every winter visitor.

Superintendent Leavitt was particularly proud of the expanding program of the annual park ranger training school. Since the first ranger training school in 1938 had proven so valuable a second school was conducted for twenty students from July 3 to August 2, 1939. The expanded program of the school included training in such subjects as police protection, forest and building fire protection, forest insects and tree diseases, fish planting, wildlife, checking station operations, and first aid. Instructors, other than members of the regular park staff, included F.P. Keen, Bureau of Entomology; W.V. Benedict, Division of Plant Disease; W.I. Howland, Klamath Fish Hatchery; and M.C. Spear, E.E. Bundy, and Willis Wood, Special Agents of the Federal Bureau of Investigation.

One of the principal duties of the ranger force continued to be forest fire control. The ranger staff handled fifteen forest fires during the year, thirteen of which occurred within the park boundaries and two outside. Lightning started eleven of the fires in the park, one was caused by a careless smoker, and one was classified as miscellaneous. Total acreage consumed by the thirteen fires in the park was less than one acre.[19]

In February 1941 Crouch updated his 1940 report on "Ranger Protection Requirements" for the park. According to Superintendent Leavitt this supplement was designed "to keep current park protection requirements to substantiate trends, which in turn give justification for changes in administration, expansion of activities, etc., and to emphasize the rapidly changing conditions from year to year." The supplemental report stated that the unprecedented travel to Crater Lake during 1940 emphasized "the urgent need for permanent personnel to look after this all-out use of the park." Despite the spiraling visitation "the numerical strength of the protection personnel remained stationary, and very definitely below a minimum required to perform satisfactorily even the most essential services expected of this division." A temporary structure had been used in the Rim Village area as a clearing house for protection activities, but a permanent ranger station was needed. Operations during 1940 substantiated the recommendation for ranger and checking stations at the north, south, east, and west entrances to the park.

Ranger districts had been established in the northern, southern, and headquarters/rim areas of the park. A fourth district had been created in the Lost Creek area "due to the extraordinary conditions prevailing in and the attention required for the Yawkey lands in the southeast corner of the park." While the districts provided for greater efficiency in ranger services Crouch observed that the "one outstanding deficiency in the operations was a complete lack of District Rangers notwithstanding the effective work accomplished by those designated Acting District Rangers." He observed:

> In the case of two districts, it was necessary to designate seasonal rangers as Acting District Rangers and all other

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> rangers assigned to these districts were seasonal men. The work expected and actually performed by these two men were those of a District Ranger, and yet it is not in conformity with good personnel management to expect them to continue in such assignments with their present ratings. The operation of the district system the past year more than justified its establishment. A continuation of the district organization will insure an increase in the aggregate volume of protection business and a greater efficiency together with a more substantial return from the funds expended for protection. Two District Ranger positions should, therefore, be established to make this possible.

Crouch also recommended the addition of an assistant chief ranger position to the park staff:

> The need for an Assistant Chief Ranger position continues apparent. Assistance in the general operation of the department--selection, training and supervision--is greatly needed in the summer season and equally so or more so in the winter season when the Chief Ranger is assigned to Klamath Falls or Medford. One member of the ranger staff has to assume responsibility for and supervision of protection activities in the park during the winter, such assignment comparing in every respect to the seasonal rangers who were designated Acting District Rangers. The work in the park during the winter must be largely planning and supervision, following general and broad programs, and places on the man greater responsibility and requires a greater scope of activities, both quantity and quality, than was contemplated in a Grade FCS 8 Ranger position. The work of this man is in every respect that contemplated in the classification of Assistant Chief Ranger and such a position should be established.[20]

By the fall of 1942 a "Crater Lake Ranger and Fire Organization" plan had been developed. It was reported that the district ranger system was working well, both in routine and emergency situations. The fire protection efficiency of the ranger force was proven by the fact that of the 23 fires (21 lightning-caused, 1 man-caused, and 1 miscellaneous) occurring in the park during the year, only one exceeded the Class A acreage of a maximum of ¼-acre and that one covered 0.77 acre. Fire protection during the year was enhanced by the completion of telephone lines from the rim to the north entrance checking station and from the park to a U.S. Forest Service guard station east of the park.

Temporary checking kiosks were placed in the center of the road at the east and north entrances during 1942. The kiosks proved to be "highly satisfactory, facilitating checking operations a hundredfold, and providing a safe and convenient place for ranger records and files." Leavitt desired similar kiosks at the south and west entrances as the existing Annie Spring station serving those entrances was "unsatisfactory for proper control, orientation, and direction of visitors."[21] (See the following page for a copy of the "Crater Lake Ranger and Fire Organization.")

American entry into World War II had a significant impact on the ranger organization and activities at Crater Lake. In June 1942, for instance, the annual field ranger school held in the park combined the normal training in fire control, law enforcement, and other protection services with civilian defense training. The latter included training in defense against war gas and incendiary bombs and understanding of civilian defense organizations and functions.[22]

Crater Lake was operated on a bare maintenance level during the war as a result of reduced park appropriations and personnel. Park rangers performed a variety of untraditional tasks during the war emergency in addition to their principal responsibilities for fire protection and safeguarding of government property. In June 1943 Superintendent Leavitt reported that the chief ranger and the park naturalist undertook the major responsibility for trail repair and other maintenance work and furnished crews to assist the park carpenter, plumber, road foreman, and engineer in their duties. Leavitt noted:

> . . . Without this fine spirit of loyalty among the more experienced and trained personnel, we would have accomplished very little, as the only unskilled labor we were able to procure was a few young boys just old enough to qualify under the age regulations, and a few old men.

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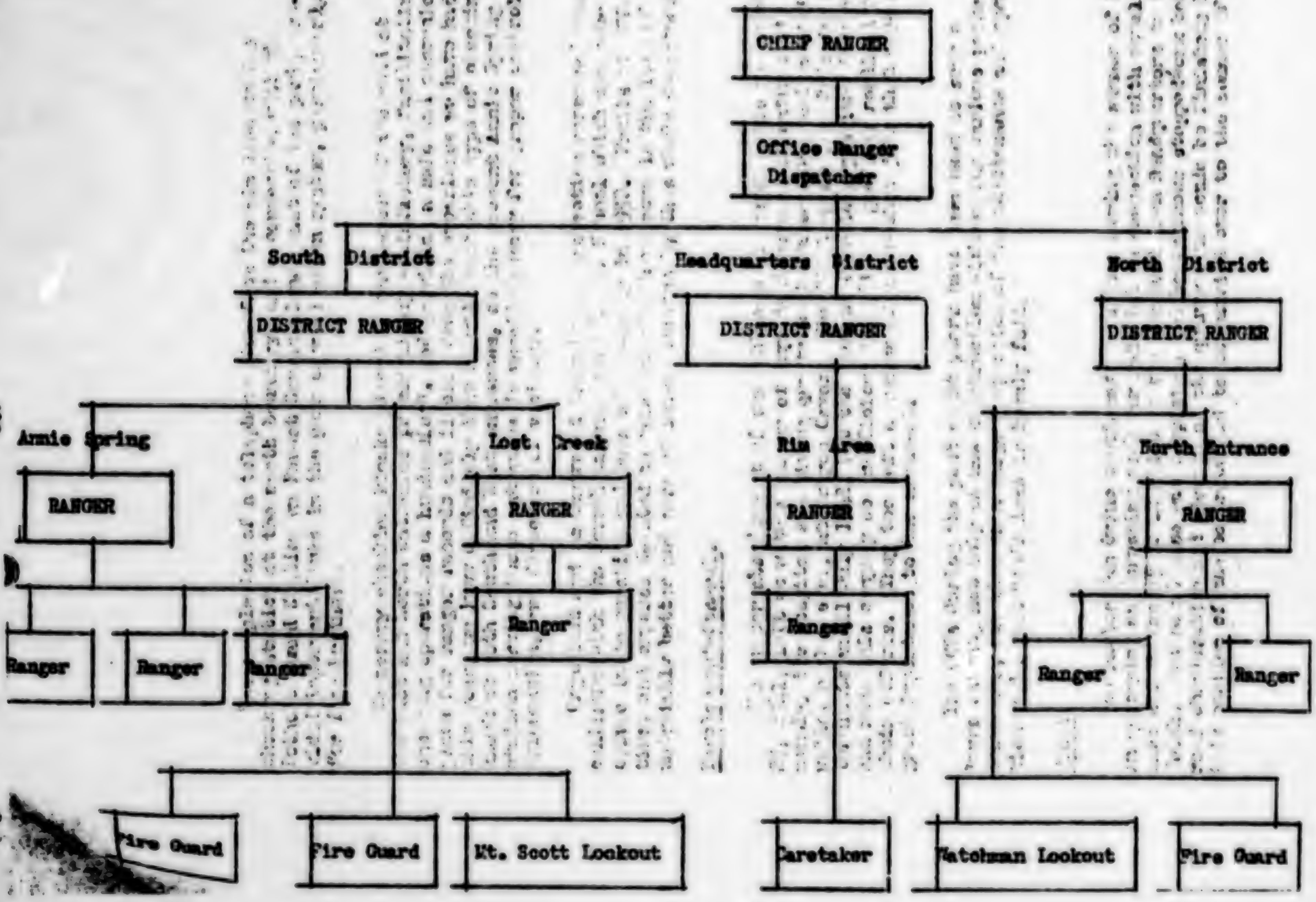
CRATER LAKE RANGER AND FIRE ORGANIZATION



> The administrative heads of Crater Lake feel moved to praise and compliment the entire force for their unselfishness, loyalty to the Service and fine spirit as evidenced by the willingness to do anything and everything they could, and for the energy displayed in every department. The accomplishments with a minimum force were remarkable. To see a group of rangers and ranger naturalists in work clothes toiling at cleaning up large rock slides and fallen trees from the roads and trails, the rangers moving and rebuilding a boat house, and doing many other tasks calling for hard physical labor as well as skill and ingenuity, is convincing proof of the superiority of the Crater Lake staff, for every one did all he could to carry on with a willing and cheerful spirit.[23]

Fire protection was the primary concern of the park ranger force during the war. The park master plan in February 1944 indicated that fire protection personnel consisted of the chief ranger, one park ranger, two seasonal fire guards, two seasonal fire lookouts, and seven seasonal rangers. As outlined in the master plan the duties of the protection organization related almost entirely to fire prevention and control. The responsibilities were:

> Recruiting, training and directing of fire protection personnel; supply and maintenance of lookouts; requisition, maintenance and use of fire tools and equipment; prevention education; fire hazard reduction; fire detection, suppression and fire studies.[24]

The park, which had been closed during the winter months throughout the war years, resumed regular year-round operations on June 15, 1946. Chief Ranger Crouch and a small staff of temporary rangers were on duty in the park several days before the official opening. By June 30, however, a staff of twelve temporary rangers and six fire control aides were working. Checking incoming park visitors was resumed with the opening of the park, and temporary checking stands were built at the south and west entrances. Checking at the park boundaries was found "to be highly advantageous," and the traffic jams, common when cars from both entrances were checked at Annie Spring, were eliminated. Regional Forester Burnett Sanford arrived at Crater

Lake on June 30 and took part in the three-day ranger and fire training school for park rangers and fire control aides that had been resumed by Crouch.

The duties of the park ranger force reverted to prewar standards during the late 1940s. Fire control, law enforcement, and visitor protection were the principal responsibilities of the rangers during the summer travel seasons. Heavy winter use of the park by skiers and other snow sports enthusiasts necessitated various

> precautionary measures by the rangers, including installation of the safety rope at the crater edge on the Rim, posting of signs, first aid, checking, traffic control, and assistance to Park visitors in pulling stuck cars back on the road, from drainage ditches on the upper side of the roads, or from below the road when they slipped or skidded off the lower side of the road grade. Rangers contributed time and effort in repairing the telephone and electric systems.[25]

The role and functions of the Crater Lake ranger force continued to be refined and expanded during the 1950s. In June 1955 an organization and function statement was prepared for the park. According to the document Chief Ranger Carlock E. Johnson was in charge of the protection division and had the following responsibilities:

> Supervises activities related to proection of life and property, and preservation of park values. Plans, coordinates and supervises projects for control of tree disease and injurious forest insects. Performs all law enforcement and traffic control duties. Collects automobile entrance fees. Disseminates complete and accurate information relating to public use of the area. Cooperates in studies of wildlife and aquatic populations and accompanying problems of habitat use or population stabilization; supervises fish planting. Maintains cooperative weather stations, snow survey courses, and civil defense activities. Organizes and directs forest and building fire presuppression and suppression activities.[26]

There were few changes in the organizational structure or responsibilities of the park ranger force during the next decade. A park organization chart prepared in October 1962 indicated that the ranger force consisted of five permanent positions. There were a chief and an assistant chief ranger and supervisory park rangers in charge of the Annie Spring (south) and Red Cone (north) districts. One park ranger was assigned to the Annie Spring District. The remainder of the ranger force consisted of "seasonals as required."[27]

The duties of the supervisory park rangers were outlined in a position description certified by Assistant Regional Director Keith Neilson on March 20, 1963. The list included nine areas of responsibility:

1. Protection of life, property, and the preservation of park values
2. Control of forest insect and tree diseases
3. Law enforcement and traffic control
4. Direction of checking station procedures and operations
5. Dissemination of information relating to public use of the area
6. In-service training
7. Wildlife and aquatic populations and accompanying problems
8. Search and rescue
9. Maintenance[28]

During the 1960s Crater Lake park management promoted development and improvement of methods and standards for visitor protection and resource management. This goal was to be achieved by emphasizing effective manpower utilization of the ranger force. In 1965, for instance, such an emphasis took the form of five objectives.

a. Continue the present programming of road patrols with the present low accident frequency rate.

b. Increase trail patrol, maintenance and improvement.

c. Continue the desire to furnish the very best of equipment and outside training for all permanent protection staff.

d. Continue the practice of on-the-job training for all seasonal employees.

e. improve visitor contact by increasing dissemination of basic information at entrance stations by the use of visual aids and handouts.[29]

By the mid-1970s the park ranger force had been placed under the Division of Interpretation and Resource Management. Answering to the chief of the division were two supervisory park rangers and one park aid. During the summers the park employed about twenty seasonal rangers and nine seasonal fire control aides. The duties of the rangers, which had changed little over the years, included:

> . . . the responsibility of the protective personnel to protect the park and its features from damage, misuse, or destruction, and to provide for the safety and health of the park visitors and employees. This responsibility includes traffic control, forest and building fire control, tree disease and insect control, public health and sanitation, accident investigation, law enforcement, first-aid, search and rescue, protection of wildlife, collection of motor vehicle fees, distribution of information to park visitors, and other related areas.[30]

As a result of park reorganization the ranger force had been placed under the Resource Management and Visitor Protection Division by the early 1980s. An updated function statement prepared for the division in September 1986 indicated that the work of the division was supervised by four specialists under the direction of the chief. The specialists were in the fields of resource management, natural resources, law enforcement, and fire management. Supervision of various ranger activities fell under each of the specialists.[31]

ENDNOTES

1. *Annual Report of the Director of the National Park Service, 1917*, p. 166.

2. *Annual Report of the Director of the National Park Service, 1918*, p. 150; *Ibid*., 1919, p. 218.

3. Annual Report, Crater Lake National Park, 1920, RG 79, Central Files, 1907-39, File No. 207-001, Part 2, Crater Lake, Reports, Annual.

4. *Annual Report of the Director of the National Park Service, 1924*, p. 118.

5. *Annual Report of the Director of the National Park Service, 1926*, pp. 115-16. A new fire lookout station was completed on Mount Scott in 1926. The U.S. Forest Service and Bureau of Indian Affairs agreed to pay jointly the wages of the lookout with the Park Service providing the structure, equipment, and supplies.

6. Annual Report, Crater Lake National Park, 1928, Files, Superintendent's Office, Crater Lake National Park.

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11. Annual Report, Crater Lake National Park, 1935, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report.

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16. U.S. Department of the Interior, National Park Service, Crater Lake National Park, "Crater Lake Ranger Manual, 1938," pp. 1-51, Museum Collection, Crater Lake National Park.

17. "Ranger Protection Requirements, Crater Lake National Park, 1940," RG 79, Central Files, 1933-49, Crater Lake National Park, File No. 207-005, Ranger.

18. Memorandum for Superintendent Leavitt, Crater Lake National Park, by Arno B. Cammerer, Director, January 29, 1940, RG 79, Central Files, 1933-49, Crater Lake National Park, File No. 207-005, Rangers.

19. Annual Report, Crater Lake National Park, 1940, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report.

20. "Supplement to Report on Ranger Protection Requirements," February 3, 1941, J. Carlisle Crouch, Chief Ranger, Resource Management Files, Crater Lake National Park.

21. Annual Report, Crater Lake National Park, 1942, Files, Superintendent's Office, Crater Lake National Park.

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CHAPTER TWELVE

RESOURCE MANAGEMENT IN CRATER LAKE NATIONAL PARK: 1916-PRESENT

A. RESOURCE MANAGEMENT: 1916-1929

The initial National Park Service resource management priorities in Crater Lake National Park were concerned with the preservation of "natural curiosities" and wildlife, the supply and regulation of fishing in the lake, and prevention of forest fires. Among the regulations adopted for the park on May 1, 1917, were rules to prevent fires and hunting, govern fishing, and preserve the national features of the area. These rules stated:

> 1. Preservation of natural curiosities.--The destruction, injury, or defacement in any way of the public property or the trees, vegetation, rocks, minerals, animal and bird or other life, or other natural conditions and curiosities in the park is prohibited.
>
> 2. Camping.--No camp will be made along roads except at designated localities. Blankets, clothing, hammocks, or any other article liable to frighten teams must not be hung near the road.
>
> Many successive parties camp on the same sites during the season, and camp grounds must be thoroughly cleaned before they are abandoned. Tin cans, bottles, cast-off clothing, and all other debris must be placed in garbage cans or pits provided for the purpose. When camps are made in unfrequented localities where pits or garbage cans may not be provided, all refuse must be burned or hidden where it will not be offensive to the eye.
>
> Campers may use dead or fallen timber only for fuel.
>
> 3. Fires.--Fires constitute one of the greatest perils to the park; they must not be kindled near trees, dead wood, moss, dry leaves, forest mold, or other vegetable refuse, but in some open space on rocks or earth. Should camp be made in a locality where no such open space exists nor is provided, dead wood, moss, dry leaves, etc., must be scraped away to the rock or earth over an area considerably larger than required for the fire.

> When fires are no longer necessary, they must be completely extinguished and all embers and bed smothered with earth or water so that there remains no possibility or reignition.
>
> Especial care must be taken that no lighted match, cigar, or cigarette is dropped in any grass, twigs, leaves, or tree mold.
>
> 4. Hunting.--The park is a sanctuary for wild life of every sort, and no one should frighten, hunt or kill, wound or capture any bird or wild animals in the park, except dangerous animals when it is necessary to prevent them from destroying life or inflicting injury.
>
> The outfits, including guns, traps, teams, horses, or means of transportation used by persons engaged in hunting, killing, trapping, ensnaring, or capturing such birds or wild animals, or in possession of game killed on the park lands under other circumstances than prescribed above, must be taken up by the supervisor and held subject to the order of the Secretary of the Interior, except in cases where it is shown by satisfactory evidence that the outfit is not the property of the person or persons violating this regulation and the actual owner was not a party to such violation. Firearms will be permitted in the park only on written permission of the supervisor. Visitors entering or traveling through the park to places beyond should, at entrance, report and surrender all firearms, traps, nets, seines, or explosives in their possession to the first park officer, and, in proper cases, may obtain his written leave to carry them through the park sealed.
>
> 5. Fishing.--Fishing is permitted with hook and line only, and never for profit or merchandise. Fishing in particular water may be suspended; or the number of fish that may be taken by one person in any one day, from the various streams or lakes, may be regulated by the supervisor. All fish hooked less than 8 inches long shall be carefully handled with moist hands and returned at once to the water, if not seriously injured. Fish retained should be killed. Five fish shall constitute the limit for a day's catch from the lake, and 20 from other waters of the park.

Superintendent Sparrow committed the efforts of the park staff to enforcement of these regulations. In his annual report for 1917 Sparrow discussed park resource management highlights for the year. He observed that wild animals were becoming more numerous in the park. He stated further:

> The park abounds in black and brown bear, black-tailed deer, cougar, lynx, timber wolves, coyotes, pine marten, fisher, several varieties of squirrels, ringtail grouse, the common pheasant, Clark crow, and numerous varieties of birds common to the country at large.
>
> There are no fish in any of the waters of the park except the lake itself and Anna Creek, below the falls. Crater Lake is abundantly supplied with a fine quality of rainbow trout. . . . The fish are large and the flesh is firm. A few have been taken 25 to 28 inches long, weighing from 6 to 7 pounds.
>
> One small forest fire occurred in the park this season, but it was brought under control before any damage was done. There were many fires outside and at some distance from the park, particularly to the southwest. At times the view of the lake was entirely obliterated by the dense clouds of smoke that rolled in from these fires, but an east wind for a few hours always cleared the atmosphere.

Sparrow observed "that a very few wild flowers" had been observed in the park. There had been no wild flowers in the park since 1902, "the sheep that ranged over this region before the creation of the park having utterly destroyed the wild-flower growth."[2]

The commitment to restore the flora of the park brought park management into conflict with regional wool growers. In May 1917 area sheepherders sought a permit to graze 7,000 head of sheep in the park. The request was denied promptly by the Park Service. In responding to the sheepherders, Acting NPS Director Horace M. Albright stated:

> In reply, I would advise you that we are considering plans for opening Crater Lake Park to the grazing of cattle and horses, and will undoubtedly be prepared to issue permits covering the privilege of grazing these animals within a short time.
>
> We can not, however, under any circumstances, act favorably upon applications for the grazing of sheep in the park. Sheep are not only very obnoxious to tourists, but they absolutely destroy wild flowers and shrubs which we are particularly anxious to preserve in the parks.[3]

Later that year Mather vigorously defended the Park Service policy of disallowing sheep grazing and restoring the flora in the park:

> Many years ago, before the creation of this park, the lower slopes of ancient Mount Mazama and the entire area now reserved and dedicated for park purposes were utilized for the grazing of sheep with the result that the flora of the region was practically destroyed. After the lapse of a quarter century flowers are still exceedingly rare, and it will require the expenditure of much time and money to restore even a small portion of its lost species of plant life. Few places accessible to the public today illustrate more forcibly the destructive action of sheep grazing on high mountain lands than does Crater Lake Park.[4]

By the early 1920s the park wildflowers had been largely restored as a result of Park Service policy. It was reported in 1921 that the park wildflowers presented "such a temptation to wild flower loving visitors that it was necessary to post signs to prevent the depletion of some species."[5] Two years later Superintendent Thomson reported that wildflowers were on the increase in the park, "miles of our roadway being fairly banked with colorful blossoms and the forest glens carpeted with literally hundreds of acres of wild flowers."[6]

In 1918 Sparrow initiated a program to exterminate certain predators in the park as a means of encouraging the growth of the deer and small mammal populations. Cougar, lynx, timber wolves, and coyotes were the objects of the extermination program. That year Sparrow was pleased to announce that deer and bear were growing in numbers and becoming "quite tame."

He also echoed earlier recommendations to expand the park boundaries to include the Diamond Lake area. The expansion was necessary, according to the superintendent, in part because the existing park was "too small for a game preserve." He noted:

> . . . Many of the deer get quite tame and it seems like murder to kill them when they stray across the boundary. One case in point occurred recently during the hunting season. Voley Pearsons, of Klamath Falls, shot a doe on the road about 300 yards outside the southern entrance to the park. The doe had frequently visited the ranger's cabin and was so tame that it would not run when an auto approached. As it is unlawful to kill a doe at any time, the man was arrested by the Park Service and turned over to the local authorities at Fort Klamath, where he was fined $25 and costs. This case is cited only as evidence of the necessity of enlarging our game preserve.[7]

Wildlife in the park continued to become more numerous in 1919, particularly black and brown bears and deer. The bears were becoming "very tame," with black bears being "seen almost daily in the neighborhood of the lodge and the construction camps." Taking photographs of feeding bears was becoming a popular visitor diversion. Smaller forms of wildlife were becoming more plentiful as a result of the continuing extermination program. A small herd of fifteen Yellowstone elk had been turned loose in the adjacent forest reserve near Seven-Mile Creek in 1917, and by 1919 the herd was using the southern portion of the park as a summer range.

During 1919 there were no major forest fires in the park. Electric storms in August, however, started minor fires, and a fire on the forest reserve west of Union Peak that crossed the park boundary caused little damage as "it was confined to snow brush on an old burn." To preclude such fires in the future work was initiated to cut brush and clear a fire lane along the park boundaries.[8]

In 1920 Sparrow reported that fewer bears had been sighted in the park. He observed:

> Though bear make frequent visits to the construction camps in search of food, they appear less numerous than last season when they could be seen almost any day and furnished considerable entertainment for tourists. That they are fewer in numbers this season is probably due to their ceasing to fear

> man and his works and hence were easy victims of hunters and trappers when they left the park for their winter quarters.

This observation led Sparrow to renew his support for an extension of the park boundaries. He commented that "when a national park is established it should be large enough to let a scared bear or deer have a good run without going over the boundary to be killed."

During 1920 the fire lane project was continued to aid park personnel in resource management and preservation. Brush was cut "from a strip 8 feet wide around the park boundary as a precaution against forest fires and to aid prevention of trespass by stockmen and game poachers." All "trees within this strip were blazed on two sides."[9]

Wildlife issues continued to be of prime concern to park management during the remainder of the 1920s. More bears fed on the garbage dump at Government Camp in 1922 than ever before, attracting considerable interest on the part of park visitors. Deer were increasing, in part because few cougars or other predatory animals had been seen in the park for several years.[10] In 1923 NPS Director Mather offered a glowing account of wildlife in the park:

> Wild life has been more abundant than heretofore, several bears daily visiting Government Camp to be fed or kodaked liberally by visitors. They became quite tame by midseason, a fact which unfortunately makes such of them as do not hibernate within the park easy game for hunters. Deer have been exceedingly abundant. Several elk, progeny of the herd transplanted into Klamath County, have been seen occasionally. Foxes, timber wolves, and coyotes were not uncommon sights, and one cougar was reported. Small game is present in countless numbers. Bird life has also been very abundant; a number of rare birds have been identified, and an unusual number of humming birds have been present in the great fields of wild flowers that carpet the forest glens. The ranger force is, however, not sufficient to adequately patrol the 249 square miles of park to protect against poaching.[11]

The park continued to encourage the growth of the bear population in part as a tourist attraction. In 1924 Superintendent Thomson reported that ten bears, including four new cubs, were "almost daily visitors at Government Camp, to the great enjoyment of thousands of visitors." As a result of such contact the bears, according to the superintendent, were becoming docile and fearless, thus leading to their destruction by hunters outside the park boundaries. This development led to a successful Park Service effort to have the Oregon state legislature enact legislation in 1925 declaring an eleven-month closed hunting season on bear in Jackson, Josephine, and Klamath counties surrounding the park.[12]

By the late 1920s park wildlife was thriving as a result of the aforementioned legislation, favorable weather and forage conditions, and management policies. In 1929, for instance, Superintendent Solinsky reported:

> Our wild life did exceedingly well this year because of favorable weather and forage conditions, which have been exceptionally good throughout the park. The bears, our most attractive animals, created considerable interest among the visitors and were seen at all centers of habitation. Deer were seen in practically every part of the park during the year, and indications point to a considerable increase in number. One herd of five elk was noticed in the southern part of the park. Signs of the predator animals, such as cougar, wolf, and coyote, show the presence of these animals in comparatively large numbers. One wolf was seen on the north rim, while a number of coyotes were reported as seen in various sections of the park. Small animal life such as marmot, ground squirrels, chipmunk, and conies were seen in great numbers. Occasonally pine martins were reported, showing the existence of this animal in the park.
>
> Bird life was much in evidence. The most common species were camp robbers, bluejays, Clark's crows, nut hatches, juncoes, robins, finches, hawks, ravens, and humming birds.[13] Eagles were seen about Wizard Island on numerous occasions.

Park management devoted increasing attention to the enhancement of fishing opportunities at Crater Lake during the 1920s. The lake was planted with 20,000-30,000 rainbow fingerlings and salmon silversides each year through the cooperation of the Fort Klamath and Butte Falls hatcheries and the State Game Commission. The silversides were found to thrive better than the rainbow trout. Stream fishing was less satisfactory than that in the lake, but good catches of Dolly Varden were reported in Anna Creek. In 1925 "four fine trout streams heretofore sterile" were planted with eastern brook and loch leven" with the intention of opening those streams to sportsmen in several years.[14]

Forestry issues, especially control of damage from insect infestation, became a major focus of park concern after 1923. That year Superintendent Thomson stated, "Outside of the lake itself our great cover of coniferous trees gave greatest pleasure to visitors." He went on to observe, "Unfortunately the thousands of trees killed by beetles during recent years present a sad aspect, projecting a definite problem that must soon be met."[15]

A preliminary study made by the U.S. Bureau of Entomology in 1924 indicated that infestation had wrought havoc throughout an area of some thirty square miles of lodgepole pine north of Crater Lake. The destruction had begun ten years before in the stands surrounding Diamond Lake and had subsequently spread southward toward Crater Lake. Thus, thousands of dead trees marred the forest vista and constituted a grave fire hazard in the northern and northeastern sections of the park. Since the infestation was spreading, immediate control measures were recommended both in the park and the surrounding forest reserves.[16]

An insect-control program, known as the Crater Lake Park Control Project, was initiated under the direction of J.E. Patterson, Assistant Entomologist of the U.S. Bureau of Entomology, during 1925-27 under a special congressional appropriation. Two species of bark beetles were targeted by the project--the mountain pine beetle attacking lodgepole pine and the western pine beetle attacking yellow pine, with the major operations being directed against the former.

Prior to the project it was determined that some 22,000 acres of the park lodgepole pine forests north of Crater Lake had been infested. Control work was not conducted on that area, however, because a high percentage of the trees had already been killed. Rather the control work was concentrated on the 8,000-acre infested area of lodgepole pine south of Crater Lake in Pinnacles, Kerr, and Munson valleys, and Anna Spring vicinity. A total of 9,696 lodgepole pine and 43 yellow pine were treated. The solar heat method of control (felling infested trees, lopping off limbs and exposing bark to direct sunlight, thus killing the larvae and beetles in the bark) was used to treat the lodgepole pines, while the yellow pines were treated by burning the infested bark in pits in the ground. The project resulted in checking the infestation south of Crater Lake and saving approximately 12,000 lodgepole pine trees.[17]

The insect control program resumed in 1929 because infestation epidemics outside the park boundaries were spreading into the park. Funds were transferred to Crater Lake from appropriations for Mesa Verde, Rocky Mountain, and Yellowstone national parks to undertake the work. In 1928 it was estimated that there were in the park 33,920 acres of dead lodgepole pine forest, 7,100 acres of active and epidemic infestation, and 15,360 acres uninfested. During the period May-July 1929 some 23,239 trees were treated for mountain pine beetle infestation in the Pinnacles Valley, Munson Valley, Anna Spring, Castle Creek, and Anna Creek (Middle and East Forks) areas of the park.[18]

B. RESOURCE MANAGEMENT: 1930-1942

From 1930 to 1942, when World War II began to have a major impact on park operations, resource management concerns, except for forestry insect control programs, appeared to become secondary to other emphases such as development and construction. Park management continued various programs, however, to promote the increase of park wildlife. Efforts were made to attract wildlife, such as deer, to visitor use areas, one example being the placement of brick salt at Anna Spring, park headquarters, and Rim Village in 1930.[19]

Park management continued to monitor and encourage wildlife activities at Crater Lake during the 1930s. In the early years of the decade the Park Service began compiling estimated wildlife censuses for the parks. The earliest such census for Crater Lake that research uncovered was for 1932. That year it was estimated that big game animals in the park included 19 elk, 60 mule deer, 250 black-tailed deer, 2 antelope, and 40 black bears.[20] Later in the decade the park began preparing annual wildlife reports which consisted of estimates of various species and observations on their habitat and migratory patterns. The earliest such report that research uncovered was for 1940. In that year estimates of wildlife in the park inluded 10 badgers, 50 black bears, 2 cascade bobcats, 5 mountain coyotes, 80 black-tailed deer, 25 mule deer, 6 white-tail deer, 6 Rocky Mountain elk, 10 Cascade red foxes, and 30 porcupines.[21]

By the late 1930s bear-visitor problems had become endemic at Crater Lake and other national parks, thus leading to increased concern for visitor protection and safety. As a result Secretary of the Interior Harold L. Ickes issued a systemwide regulation forbidding the public to feed bears. In accordance with the new policy NPS Director Arno B. Cammerer wrote a letter to Superintendent Leavitt on March 24, 1938, urging him to initiate publicity and educational park programs to encourage the public to stay away from the bears. He urged modification or elimination of bear shows at dump sites by park personnel and shipment of troublesome bears to outside agencies.[22]

Park management continued to ensure good fishing prospects in the lake and other streams during the 1930s. In October 1929 some 7,000 fingering trout from the State Fish Hatchery at Butte Falls were planted in the lake and streams, making fishing in the lake and Sun Creek exceptionally good during the 1930 season.[23] During the fall of 1931 some 200,000 fingerling rainbow trout and salmon silversides were planted in the lake and some 40,000 in smaller streams in the western and central portions of the park, thus making fishing in Crater Lake, according to Superintendent Solinsky, "superior to any location in the vicinity, including both Diamond Lake and Lake of the Woods."[24]

Fish planting became one of the responsibilities of the Emergency Conservation Work (ECW) programs at Crater Lake during the 1930s. In 1935-36, for instance, ECW personnel planted more than 100,000 fingerling trout in the lake and some 75,000 fingerlings in park streams.[25] The following year Superintendent Canfield reported that Crater Lake had "strengthened its reputation as being one of the choice fishing spots in the west," there being frequent reports of limit catches which had been raised to twelve trout.[26]

Forest insect control continued to be a prime focus of Crater Lake resource management efforts during the 1930s. After 1929 the threat of the bark beetle epidemic waned on unprotected forest areas at Crater Lake. Park management adopted a plan of mopping up all epidemic centers within the park and on national forest lands within a 15-20-mile radius of the park. With the extension of this program the control results on the protected areas improved. This change of program increased the number of trees treated annually from some 3,700 trees before 1929 to an average of 16,800 trees during the early 1930s. Among the areas treated during the early 1930s were Anna Creek, Castle Creek, Sun Creek, and Mount Scott in the park and Sand Creek in Umpqua National Forest.[27]

A new method of pine beetle eradication was introduced in 1932. The method and rationale behind its use were described by Superintendent Solinsky:

> This year the so-called solar method of pine beetle eradication was not found completely effective in thick forested areas and on northern exposures, due to extremely cold weather. Under such conditions a method of eradication by burning using an oil spray proved 100 percent effective. It is thought that the pine beetles are well under control and only a small allotment will be required each year to keep them so.[28]

The mountain pine beetle epidemic in the park was declared to be eradicated in November 1933 by Entomologist F.P. Keen of the U.S. Bureau of Entomology. He observed:

> That the mountain pine beetle in the pine stands of Crater Lake National Park was brought completely under control by the work conducted in the spring of 1932 was further verified by the scouting and control work conducted during 1933. While a few scattered infested trees could be found, there was no evidence of concentrated grouping of beetle activity. On most of the park units the beetles are all but exterminated. Therefore for the next few years, only a maintenance control program needs to be considered on Park forests.
>
> A highly dangerous concentration of beetles in the Sun Pass area of the Rogue River National Forest a mile or so from the southeast corner of the Park still continues as an aggressive epidemic and is a menace to the park in that at any time a migration of beetles back into the park may take place. It is hoped that this infestation can be completely cleaned up next spring.

Keen went on to describe control work during the spring of 1933:

> The maintenance program for 1933 called for the treatment of about 5,000 trees at a cost of $4,000. This program was started early in June when spotting crews were placed in the field to mark the infested trees and some treatment at the lower elevations was started by the regular experienced control crews.
>
> Then two of the Emergency Conservation Work camps were established in the Park, one on Anna Creek and the other on Sand Creek and the beetle control work made an important part of their activity. For a time as many as 200 men from the CCC camps were employed in the beetle control work. As a consequence a large area of the Park was thoroughly combed for infestation and a complete clean up secured. Even so only 7,026 infested trees of which 5,794 were lodge pole were found on the 30,750 acres covered. . . .[29]

In 1936 it was evident that white pine blister rust was rapidly approaching the park. It was determined that protection of the Cloudcap area and its homogeneous stand of whitebark pine was imperative. Accordingly the Cloudcap Blister Rust Control Unit was established as a cooperative venture with the Bureau of Entomology and Plant Quarantine of the U.S. Department of Agriculture in 1937. Within three years more than 133,600 alternate host plants (Ribes sp.) were eradicated in a control unit of 3,632 acres.[30]

During 1936 a vegetation type survey of Crater Lake National Park was conducted as an Emergency Conservation Work National Park Service project under the supervision of the Branch of Forestry. Field work was started on May 21 and completed on August 15, and the office work connected with the survey was done at the Berkeley office of the Branch of Forestry during the winter months. Personnel of the crew consisted of Martin H. Mitchell, Junior Forester, Homer W. Marion, Assistant to Technician, and two men from the local Civilian Conservation Corps (CCC) camp. Planimetering of the types was done by Dean F. Schlobohm, Junior Forester.

The vegetation type survey was conducted to meet an ever increasing need for a map showing the composition, extent, and character of the park vegetation. The data was to be used as a basis for:

1. Rating fire hazard and protection planning
2. Planning insect and disease control
3. Determining the proper use and treatment of land for recreation, campground development, wild life, reforestation, erosion control, etc.
4. Augmenting the supply of knowledge concerning the flora and other natural features of the area in question
5. Providing an inventory of forest lands

The ultimate objective of the project was to produce not only a vegetation type map but also a reference map, vegetation type sample plot records, narrative type descriptions, and illustrated herbarium specimens. One of the products of the survey was a condensed summary of vegetation types in the park:

Type		Acres
Lake		11,144.40
Barren		1,712.11
Herb--grass and semi-barren herb-grass		3,636.33
Residential		29.56
Chaparral		1,524.36
Weedland		11.99
Douglas fir belt		1,006.14
Ponderosa pine belt		6,014.33
Pine-fir belt		41,128.14
Lodgepole pine-hemlock		73,450.20
Fir belt		17,885.65
White bark pine		587.37
Spruce		14.20
	Total	160,333.00[31]

While some fire protection improvements had been constructed in the park prior to 1930, lack of funds and information limited such endeavors. In 1930 John D. Coffman, Chief of Forestry of the National Park Service, prepared the first "Report on the Fire Protection Requirements of Crater Lake National Park." The report, which served as a blueprint for the development of the park fire protection program during the next decade, surveyed fire hazards in the park and included recommendations on the need for fire equipment, a fire detection system, personnel placement, cooperation, training, and hazard reduction measures. Among other recommendations the report urged that the following be constructed to provide adequate protection against fire for park forests and facilities:

Protection telephone lines
Fire protection buildings (fire lookout on Watchman Peak)
Protection road (rim to Mount Scott)
Protection motorways (75.9 miles)
Protection trails (3 miles)[32]

In 1942 Associate Regional Forester Jack B. Dodd prepared a comprehensive "Report on Forest Protection Requirements for Crater Lake National Park." The report presented an overview of forest protection policies in the park from the time of Coffman's report until May 1942. The study found that there had been 152 fires in the park during the eleven-year period from 1931 through 1941--110 lightning-caused and 42 man-caused (smoker, 24; camper, 5; debris, 4; and miscellaneous, 9). As part of the campaign to promote fire prevention, efforts had been made to establish strict park regulations regarding fires and to promote general public awareness of the fire threat.

During the 1930s and early 1940s the park engaged in an active fire hazard reduction program using the services of Civilian Conservation Corps personnel. Clean-up to reduce the fire hazard was carried out along all major roads, power and telephone clearings, and some of the motorways. "Cat trails" were cut through the formerly logged Yawkey Tract and efforts to clean up the unburned slash and snags left by the logging operations in the area were conducted to reduce the fire hazard and preserve the vegetative cover of the tract. Two primary fire detection lookouts were located in the park, one on the rim of the crater on the west side of the lake called the Watchman and the other on Mount Scott, a volcanic cone on the east side of the lake several miles distant from the crater rim. During the 1930s two seasonal fire guards were on the forest protection and fire prevention payroll, both of whom were stationed at park headquarters until 1940. In 1941 one remained at the headquarters to handle fire matters in the southern half of the park, while one was stationed at the North Rim Ranger Station. An extensive telephone and radio system was installed and proved useful in fire suppression work. Fire weather stations were maintained at park headquarters, the two lookouts, and Lost Creek Ranger Station during the fire seasons in 1938, and the U.S. Forest Service cooperated by providing weather data. The park purchased enough fire fighting equipment to supply 150 to 175 men. Annual firefighting training schools for park personnel were instituted in the late 1930s, and in 1935 plans were drawn up by the chief ranger outlining the duties of fire protection personnel and providing for the employment of transient labor to supplement the ranger organization, other park personnel, and CCC enrollees in fighting fires on an as-needed basis. In 1937 cooperative agreements were drawn up with the Rogue River and Umpqua national forests and the Klamath Indian Reservation for mutual fire suppression aid. These cooperative agreements were extended indefinitely in 1938.[33]

C. RESOURCE MANAGEMENT: 1940s

Despite the virtual shutdown of regular park operations during World War II, park management continued to be concerned with resource management issues. One of the continuing problems facing the park was wildlife protection. In November 1944, for instance, the park master plan described the problems facing park wildlife:

> The topography of Crater Lake National Park consists mainly of a mountain top of high elevation, without adequate winter range in the adjacent valleys for the various park animals, which migrate to lower elevations each winter because of the deep snow fall. Except for such animals as hibernate during the winter months, no natural faunal unit exists within the park, which in reality constitutes an entirely inadequate range for many of the larger or migratory park animals, and causes them to fall prey to hunters and trappers each year as they move outside of the park boundaries.
>
> The area immediately to the east of the park is adjacent to the Klamath Indian Reservation, and the Indians, natural-born hunters, recognize no closed season. The east slope of the Cascade Range in the park area is therefore believed becoming particularly depleted of various larger or migrating animals. The west slope of the range, a small part of which is within the park, and the area to the west of the park boundary in the Rogue River National Forest, constitutes a more favorable range. Unfortunately these animals, particularly bear and deer, migrate in and out of the park into the adjacent National Forest area or on to privately owned lands, where more or less hunting of bear, deer and lesser animals continues throughout the year, with but slight regard for the open and closed seasons, enforcement of which is vested in local authorities. Many "old-timers" still consider they are justified in killing a deer, an elk or a bear any time they get the chance.[34]

In terms of wildlife concerns bear management problems continued to be the principal problem facing the park. On August 17, 1942, a special report on the issue stated:

> The lack of travel due to the war restrictions, and the absence of CCC camps, road contractors camps, etc. has resulted in a drastic reduction in the amount of garbage heretofore available at our garbage disposal area. The bears, which have been

> spoiled for a good many years back by having ample food supplies, still hang around this pit, expecting to be fed, instead of getting out and rustling their own living. The result is that the bears have been hungry and as a consequent have been ill-tempered and more dangerous than at any time in the past several years. They have also done considerable damage, and have made themselves a nuisance generally.

A month later Superintendent Leavitt submitted to NPS Director Newton B. Drury a list of twelve serious "bear depredations" in the park during the summer.[35]

Crater Lake officials took various actions to deal with the bear problem in the park. In 1943 park rangers at Crater Lake, along with those in Yellowstone and Yosemite national parks, initiated programs that resulted in the disposal of some 87 bears as a population control measure and to eliminate animals that were dangerous to human beings.[36] Two years later a new garbage disposal site was established in an isolated area at the lower end of Munson Valley, some 2½ miles south of park headquarters where the original garbage dump had been located. Although signs were posted "Danger--Do Not Feed the Bears" there was a continuing problem with park visitors feeding bears from their cars along park roads, thus causing traffic obstruction and risks to visitor safety. One boy was severely bitten during such an incident. Efforts were made to educate the public about the personal dangers associated with feeding bears as well as the fact that feeding bears often led to their becoming troublesome.[37]

Management of fishing and fish planting continued to be issues of concern to park management during the war. New fishing regulations were issued on April 6, 1942. The revised rules provided for:

> A state or federal license to fish in Crater Lake National Park is not required. Fishing with nets, seines, traps, or by the use of drugs or explosives, or for merchandise or profit, or in any way other than with hook and line, the rod being held in the hand, is prohibited.

> Fishing in particular waters may be suspended, or restricted. Although general regulations governing parks permit a catch of only ten fish per person per day, the number of fish that may be caught in Crater Lake National Park has been set at 12 fish per person per day. . . . The limit of fish in possession at any one time is two days' catch.
>
> No fish less than six inches long may be retained, unless a different limit is established by special regulations. All fish hooked less than such limit in length shall be carefully handled with moist hands and returned at once to the water, if not seriously injured. Undersized fish retained because seriously injured shall be counted in the number of fish which may be taken in one day.

Some 20,000 rainbow trout from the state fish hatcheries at Butte Falls and Fort Klamath were planted in Crater Lake in 1941. Thereafter, planting was discontinued and would never be resumed.[38] (See the following page for a copy of "Fish Liberations in Crater Lake" during 1910-41.)

Protection of park forests against forest fires was one of the principal concerns of park management during the war. The park fire protection program was divided into three categories for management purposes: prevention, presuppression, and suppression. Prevention included public control and education and fire hazard reduction. Presuppression comprised organized personnel training, acquisition of fire equipment, and physical improvements. The latter included protection motorways, fire, horse, and foot trails, and fire breaks; lookout stations on the Watchman and Mount Scott; four ranger stations at the north entrance, Annie Spring, Lost Creek, and park headquarters; five patrol cabins at National, Bybee, Red Blanket, and Bear creeks and Maklak Spring, a radio and telephone communication system; and fire toolboxes and caches. Suppression of fire was to be accomplished primarily by trained park personnel employing hand tools. Cooperative fire fighting agreements were in force with all adjoining forest protection agencies. To strengthen the park's fire-fighting capability a detailed Memorandum of Understanding between the Departments of the Interior and Agriculture for mutual aid in fire control was approved in January 1943.[39]

Fish Liberations in Crater Lake
1910-1945

Year	Rainbow Trout	Brown Trout	Silver Salmon (Silversides)	Cutthroat Trout	Steelhead
1910	50,000	--	--	--	--
1914	2,000	15,000	--	--	20,000
1922	25,000	--	3,500	--	--
1923	--	--	--	14,000	11,000
1924	24,000	--	--	--	--
1925	--	--	22,500	--	--
1926	--	--	--	--	--
1927	46,800	--	--	--	--
1928	64,000	--	--	--	--
1929	--	--	--	--	--
1930	3,000	--	7,500	--	--
1931	--	--	--	--	98,000
1932	156,000	--	--	--	163,000
1933	--	--	200,000	--	150,000
1934	--	--	54,000	--	--
1935	--	--	100,000	--	20,000
1936	--	--	25,000	--	25,000
1937	100,000	--	50,000	--	--
1938	--	--	--	--	--
1939	100,000	--	--	--	--
1940	85,820	--	--	--	--
1941	20,000	--	--	--	--

Old Naturalist Files, Crater Lake National Park.

By the early 1940s a soil and moisture conservation program had been initiated at Crater Lake. The program, as described in November 1944, had two principal objectives for resource management:

> 1. To stop erosion on slopes, cuts, fills, embankments, borrow pits and quarry sites, and to promote growth of grasses, plants, shrubs, bushes and trees on all such areas where vegetation is now lacking, in order to restore these slopes to a more pleasing and natural condition and at the same time materially reduce the present heavy annual maintenance costs of removing eroded material.
>
> 2. To stop erosion of Crater Walls at developed or improved areas in an effort to preserve and protect the rim of the crater and save trees, bushes, shrubs, plants, and grassed areas from destruction. To prevent erosion of the soil on which improvements exist, viz sidewalks, parapet walls, buildings, landscape planting, etc.[40]

The year 1946 marked a transition from war-time to peace-time operations which entailed many readjustments in forest protection at Crater Lake. During the year the ranger and fire protection forces handled only five forest fires, all inside the park, three of which were lightning-caused and two man-caused. The Fire Weather Unit of the U.S. Weather Bureau broadcast daily fire weather forecasts and supplemented these with telegraphic forecasts at particularly critical periods. Local fire weather conditions were determined by the stations at park headquarters and the Watchman Lookout. A revised administrative plan of action (Strength of Force Plan) was developed to ensure improved fire protection and suppression (a copy of the plan may be seen in Appendix A). Improvements were made to the Watchman and Mount Scott lookouts, the park telephone and radio communication systems, and the truck trail system for fire control purposes.[41]

During the fall of 1946 a field survey and report of mountain pine beetle infestation conditions by R.L. Furniss of the Portland Laboratory of the Bureau of Entomology and Plant Quarantine led to the development of an insect control project at Crater Lake. The project was carried out in May-June 1947 and had as its objective the halting of an aggressive beetle infestation in the lodgepole pine stands in the southeastern section of the park. Two treating methods were used--solar heat and lethal oil spray. Wherever possible the solar heat method was employed as it was quicker and less costly. Both methods required that the trees be felled, limbed, and the tops cut off.[42]

During the postwar years park management gave increasing attention to the question of recreational fishing at Crater Lake. While a definitive policy was not formulated, the park took the position of neither encouraging nor discouraging fishing pending further limnological studies. In August 1948 Superintendent Leavitt explained the rationale behind the park staff's thinking on the subject:

> . . . beginning with the season of 1937 a research project was started by conducting limnological studies by Professor A.D. Hasler under the supervision of former Park Naturalist John E. Doerr. The primary purpose was to determine the amount and character of fish food available in the lake to the rate of growth of fish, fishing conditions, and related data in order to obtain the information necessary in carrying out our fish planting and fish catching program. These studies have been carried out since that date from season to season under the general supervision of Dr. Donald S. Farner, interrupted, of course, by the war period and Dr. Farner's inability to be with us every season.
>
> Our studies began on a theory that fish were unable to spawn in Crater Lake. We found this to be untrue as there is definite evidence that the silverside salmon do spawn in Crater Lake, and we have good reason to believe that the rainbow trout do also. If natural spawning occurs in the lake, the management program that we visualized at the beginning of our study cannot be carried out because of inability to control the number of fish that might be introduced into the lake through spawning. All our studies to date indicate that there is a great deal of information still to be obtained before we can determine whether we shall attempt to continue Crater Lake as a fishing lake as it has been in past years or whether we will let the fish die out and keep Crater Lake in a natural and unmodified condition without fish life as it was when first discovered.
>
> More and more we are thinking seriously of endeavoring in every possible way to keep the waters of Crater Lake, the crater walls, and Wizard Island areas in as natural a condition as possible, unmodified by the hand of man.

> There are many lakes in Oregon suitable for fishing, boating, swimming, and other recreational sports, but there is only one Crater Lake in the world.[43]

D. RESOURCE MANAGEMENT: 1950s-1960s

Resource management issues during the 1950s and 1960s remained similar to those of earlier years. The park continued to have bear problems in the postwar years. In response to a request from the regional director in San Francisco Superintendent Leavitt in February 1951 reported on the issue and park efforts to eliminate the trouble. Leavitt listed a number of ways in which park management had attempted to meet the problem, "all of which have been partially successful but none of which have been as successful as we might wish." These efforts included:

1. Education of government, concessioner, and contractor employees and park visitors against feeding bears by hand or from cars
2. Education of campers in protecting food supplies
3. Efforts to discourage bears by daily removal of garbage, particularly late in the afternoon
4. Placement of garbage containers at government residences inside of buildings

Leavitt recommended that the park staff be permitted to give a citation with penalty to anyone feeding the bears.[44]

The park's bear policies were generally consistent with the wildlife policy as stated in the NPS Administrative Manual developed in the 1950s. That policy read:

> The animals indigenous to the parks shall be protected, restored if practicable, and their welfare in a natural wild state perpetuated. Their management shall consist only of measures conforming with the basic laws and which are essential to the maintenance of populations and their natural environments in a healthy condition.[45]

In line with that policy park management, after consultation with the U.S. Fish and Wildlife Service and the Montana Department of Fish and Game, purchased in 1959 a "Cap-chur" gun and necessary accessories and drugs to experiment with removing troublesome bears rather than by trapping.[46]

The issue of fishing and fish planting at Crater Lake had become a subject of intense debate by 1958. As a result O.L. Wallis, an aquatic biologist, undertook a study to determine whether the lake should be restocked to improve fishing or whether sole reliance should be placed upon the limited natural reproduction of rainbow trout and kokanee salmon to maintain limited sport fishing.

As part of his study Wallis examined the history of fish planting in Crater Lake. Since the original stocking of fish in the lake in 1888 various species had been introduced with varying degrees of success. All species died out within several years with the exception of the rainbow trout and kokanee salmon which had been able to maintain small, fluctuating populations by natural reproduction. Areas for natural spawning were few, and the quantity and quality of foods available for fish were limited.

The introduction of exotic fishes had upset the original ecological conditions in the lake to a certain extent. The unique Mazama salamander, endemic to Crater Lake, had been utilized as food by the fish in the lake. This salamander and possibly numbers of various other endemic organisms had been reduced by the exotic fishes.

Prior to 1941 periodic plantings of salmon and trout maintained a small fishery in Crater Lake. During the next two decades, however, natural reproduction supported the entire fishery at a low but fluctuating level, thus providing limited fishing opportunities for those willing to expend the necessary effort.

Even during years when catch successes were relatively high, fishing pressure on Crater Lake was light. Only 1 out of every 183 park visitors fished at the lake in 1941 when this activity was at its peak. The low level of activity in spite of good fishing success was the result of a variety of factors:

1. Crater Lake was not readily accessible
2. Snow and cold weather conditions made the fishing season short
3. Fishing was restricted to daytime hours
4. Boats were not available during the better fishing periods of early morning and evening
5. Fishing on Crater Lake required unique skill and experience

According to Wallis an expanded and reactivated fishery on Crater Lake would be expensive. It had been estimated that only 0.008 percent of the fish stocked in the lake in the past had been caught. After years of planting thousands of trout, the maximum number of rainbow trout taken in a single year was 593 in 1937.

Improved fishing possibilities would increase the numbers of those participating in that recreational activity. Greater numbers of fishing participants would impact park operations and place greater demands on the park staff resulting in:

1. Increase problems of visitor protection
2. Demands for easier access to the lake
3. Additional boating facilities and overnight accommodations at the edge of the lake
4. Introduction of exotic food organisms to supplement the limited natural supply

Wallis concluded his discussion of lake fishing policy by observing that the National Park Service would be more consistent with its major conservation objectives if it did not attempt either an intensive effort to develop an expanded artificial fishery or to maintain the present inadequate one.

Wallis also addressed the question of fishing policy on the park streams. Personnel of the Park Service and the Fish and Wildlife Service agreed that park streams were "small, cold waters" and that "natural reproduction of brook and rainbow trout was adequate to maintain wild populations" under the existing limited fishing activity. If such pressures should increase and the natural populations became endangered, however, special regulations could be introduced, providing for lower catch and higher size limits, fishing-for-fun only, and use of artificial flies.

In conclusion Wallis recommended that the park adopt a new fishing policy. The policy statement read:

> Fishing shall be permitted in Crater Lake and in the streams of Crater Lake National Park, but this activity shall be subordinate importance. The catch shall be dependent upon the self-sustaining populations of fishes. Additional plantings of fishes and other organisms shall not be made in Crater Lake or in the streams.[47]

The proposed policy statement received the endorsement of Regional Director Lawrence C. Merriam on May 2, 1958. While supporting it, however, Merriam felt that the policy should be put into effect gradually:

> We believe, however, that care should be taken in putting the policy into effect that we don't stimulate adverse criticism through too rapid action. We feel that a quietly operated program to de-emphasize fishing, coupled with the low survival factor of young fish in the lake waters, will produce the proper climate for cessation of any planting in a few years. Certainly we feel the policy should be operated on a medium range time schedule, with the probable elimination of a public relations problem, rather than a short range time schedule with the likelihood of developing a controversy.[48]

Forest protection continued to be a prime concern of park management during the 1950s and 1960s. A survey of the park forests in 1959-60 found a downward trend in the severity of attacks by mountain pine beetle infestation in the lodgepole and western white pines. It was discovered, however, that there was an upswing in attacks by western pine beetles in the ponderosa pine stands. Thus, a treatment program was commenced to counter that infestation.[49]

Fire prevention and control also continued to be of prime concern to park management. A park fire historical study conducted in July 1964 found, however, that "fire risks and hazards" were "considered to be generally low in this area compared to other parks." The study stated:

> Climatic conditions and vegetative development at the Park's high elevations are responsible with its exceptionally high soil moisture content, low litter and debris accumulation and the pumice soil.

The study also provided a summary of the fire history of the park during the previous thirty years:

> Annual mean averages during the past 30 years discloses that 7.6 lightning, 1.2 smoker, 0.3 camper, 0.2 debris and 0.5 miscellaneous fires occur each year. The maximum total fires occurring in one season has been 28. During this thirty year period about 85% of all fires were Class A, with 15% being Class B. There have been no Class C, D, or E fires during this period. Non-preventable fires have resulted in 83% Class A fires and 17% Class B fires. Preventable fires resulted in 91% Class A and 9% Class B burns. An average of three acres has burned annually in the Park, with a suppression cost of $645. . . .[50]

E. RESOURCE MANAGEMENT: 1970s-1980s

Resource management concerns continued to be the focus of considerable attention by Crater Lake National Park personnel during the 1970s and 1980s. In June 1970 the Service adopted three objectives that would govern the parameters for resource management concerns for the decade. These were:

a. The primary natural resources of the park will be managed to insure the perpetuation of the factors basic to the park's establishment

b. Encourage and administer a viable and purposeful research program

c. Road systems and park developments will be brought into balance with demonstrated visitor use patterns with regard to the influence on existing ecosystems[51]

One of the primary issues that continued to face park officials in the early 1970s was wildlife management, particularly as it pertained to black bear. Thus in November 1974 Superintendent Sims approved a bear management plan that was in line with the NPS Advisory Board on Wildlife Management's recommendation "that the biotic associations within each park be maintained or, where necessary, recreated as nearly as possible in the condition that prevailed when the area was first visited by white man."

The approved plan reflected the extension of policies and procedures that had been in place at the park for several years as park managers, in an attempt to revert the black bear back to its natural food source and to avoid human injury and property damage incidents, had eliminated all dumping within the park, installed bear-proof garbage cans, and initiated a bear research program. It was noted that when Crater Lake was compared with other large national parks the number of bear incidents was not as numerous nor the incidents as serious. Reported personal injuries inflicted by black bears over the previous ten years had averaged one in every two years. Black bears that had been destroyed were few in number and were primarily those who inflicted injuries to humans. It was estimated that the existing bear population in the park was about the same as it had been in 1902, ranging between 75 and 100 animals.

The management objectives of the 1974 bear management plan were three-fold. They read:

1. Preserving and maintaining black bear populations under natural conditions in their natural habitat
2. Providing for visitor and employee safety and elimination of property damage due to bear incidents
3. Providing opportunities for visitor appreciation and enjoyment by having visitors observe free roaming bears in their natural environment

To provide for effective implementation of the plan a management program was outlined. The program included "action steps" for public relations and visitor appreciation; reporting and law enforcement procedures, bear-proofing garbage cans, and research on bear ecology, habitat, and behavior. Problem bears would be removed if found to be exhibiting the following behavioral characteristics:

1. Bears threatening people without provocation
2. Bears exhibiting their loss of fear of people by repeatedly entering heavy visitor use areas including campgrounds and residential areas
3. Bears regularly causing major property damage such as breaking windows in cars and trailers or causing considerable property damage when breaking into closed structures

Problem bears would be dispatched only as a last resort.[52]

An updated and revised "Bear Management Plan" for the park was approved by Superintendent Rouse in January 1980. The plan, which provided more detail regarding policy and procedure implementation than the 1974 plan, contained most of the salient points of the earlier document. The 1980 plan was prefaced by a summary account of visitor-bear problems in the park:

> Human-bear conflict resulting in property damage has increased over the past few years. No injuries have been recorded, however, several close calls were reported. The conflicts between bears and humans are due to the present and past

> availability of human supplied food sources for the bears. Food-reward association with humans has resulted in the loss of fear of man and a more sophisticated population of bears is again beginning to develop at Crater Lake. The availability of unnatural food sources is altering the bears natural, wild behavior and foraging habits.

The plan established three management objectives in accordance with NPS policies:

(1) To restore and maintain the natural integrity, distribution, abundance, and behavior of the endemic black bear populations

(2) To provide for the safety of Park visitors by planning the development and use of the Park so as to prevent conflicts and unpleasant or dangerous incidents with bears

(3) To provide opportunities for visitors to understand, observe, and appreciate the black bear in its natural habitat with a minimum of interference by humans

Accordingly the plan implemented a program consisting of five basic elements to prevent the causes of man-bear conflicts: (1) public and employee information and education; (2) removal of artificial food sources; (3) enforcement of regulations regarding feeding of wild animals and proper food storage; (4) control of problem bears; and (5) continuation of a research program on the black bear population dynamics and ecology and monitoring of bear-human relationships.[53]

To increase the efficiency and effectiveness of the park's fire prevention and control program a new "Fire Management Plan" was approved in August 1977. The purpose of the plan was to provide overall program direction and establish approved procedures for the management of natural, wildland, and prescribed fires within the park. According to the plan, a primary objective of the National Park Service in managing natural areas was the maintenance of ecosystems in as nearly a pristine condition as possible. The primary emphasis was on the preservation of processes, such as plant succession, rather than preservation of single features or species. Thus, an important objective was "the management of fire to simulate pre-settlement influences on natural processes." Since cultural resources and physical facilities needed protection, however, an important objective was the suppression or control of fires which might pose a threat to such resources. Fires that threatened to cause damage outside park boundaries were also to be controlled. To conform with these NPS policies the plan established three specific objectives for fire management at Crater Lake National Park:

> 1. Any fire which threatens cultural resources or physical facilities will be suppressed, as well as fires which may endanger resources adjacent to the park.
>
> 2. Fire will be reintroduced in those vegetation zones in which fire has significant primeval influences on natural succession. This may involve natural and/or prescribed fires. In some areas, heavy fuel accumulations will be reduced by prescribed fires before natural fires are allowed to burn. Two principal components of this objective are the restoration of primeval forest composition and reduction in probability of unnaturally intense or catastrophic wild fires caused by unnaturally high fuel accumulation.
>
> 3. Research on the role of fire in various Crater Lake ecosystems will be continued. This will include monitoring of ecological effects of prescribed and natural fires, as well as acquisition of information on fuel accumulations, forest insects and diseases, vegetation dynamics and other topics important to fire management and planning.[54]

Other resource management action plans were developed during the 1970s and 1980s by the Crater Lake staff to deal with specific problems. An example was the "Hazard Tree Management Plan" approved by Superintendent Rouse in July 1982. Many facilities in the park were located in heavily forested areas, surrounded by trees 50 to 150 feet in height. Periodically, trees, or parts of trees, fell and damaged park facilities, and the potential existed for loss of property or injury to park visitors or employees. Thus, the goals of the plan were to: (1) minimize the hazards to park visitors, employees, and facilities; (2) develop and use dependable, well-defined standards for hazard tree identification and evaluation; and (3) maintain the integrity of the park forests to the fullest extent possible.[55] Other examples of resource management action plans include a "Hydroseed Revegetation Plan" in 1985 to restore areas scarred by early park road construction, and a "Peregrine Falcon Action Plan" adopted in 1986 to ensure the retention of a reproductive population of such birds in the park. The former was based on revegetation plans to repair Annie Creek Trail and plant seedlings on the Annie Spring cut-off road cut. The latter plan was developed in cooperation with the Oregon Department of Fish and Wildlife and the Santa Cruz Predatory Bird Research Group. A "Boat Operation Plan" was approved in May 1980 to provide for maximum human safety and to ensure the environmental integrity of the lake.[56]

By the early 1980s four cooperative agreements had been negotiated between the park and other government agencies for various phases of park resource management. One cooperative agreement was with the U.S. Forest Service for fire suppression and other resource management activities of mutual concern, including hazard tree reduction, cattle trespass across park boundaries, helicopter rental, and equipment loading. Another was with the Oregon Department of Fish and Wildlife for research and monitoring of deer and elk herds, including migration patterns, population trends, and range conditions and management of the reproductive success of the only known nesting peregrine falcons in Oregon. An agreement with the Oregon Department of Forestry provided for the management of prescribed fire smoke. A fourth agreement was with the Oregon Department of Environmental Quality which provided for the monitoring of air quality in compliance with the standards of the Clean Air Act, as amended in 1977.[57]

During the mid-1970s Crater Lake park managers turned their attention toward the development of a resource management plan for the biological and natural features of the park. The plan was to be in compliance with both NPS management objectives and policies and the park's "Statement for Management." The objectives for resource management as adopted by the Park Service in July 1975 provided that the "perpetuation of the full diversity of a natural environment of ecosystem . . . is and must remain a distinguishing aspect of the Service's management of natural lands. Policy and management emphasis must be toward perpetuation of these natural processes, assuring that impacts are not irreparable." Accordingly, the Park Service would continue "to perfect its expertise in ecosystem management, including programs relating to wildfire and prescribed burning techniques, wildlife ecology, necessary regulation and control of resource use and pollution control and abatement." Critical resources were to be monitored for change and management of other practices having adverse effects on natural processes was to be modified.

The park's "Statement for Management" developed in 1975-76 stated that it was the objective of the park "to conserve the Park's ecological resources free from adverse influence of man while allowing those types of use and development that do not significantly impair park resources." For the purposes of natural resource management five land classification zones or ecosystems were recognized in the park: Crater Lake; ponderosa pine forest; lodgepole pine forest; mountain hemlock forest; and pumice desert.

With these objectives as a basis for planning the Crater Lake park staff developed a draft resource management plan in January 1977. Proposed management programs were outlined in the draft plan detailing characteristics of park resources and defining management strategies to achieve park objectives.[58]

To insure that resource management was fully integrated into the park administrative structure the position of Resources Management Specialist was established during the early 1980s. This event was significant in that it represented a change in the attitude of the National Park Service and the park toward a more professional approach with specially trained personnel in the field for local management of park resources.

After further study and refinement a Resource Management Plan for the park was approved in 1982 by Regional Director Daniel J. Tobin. The plan, which was to be revised and updated annually, consisted of two components--a "Natural Resources Management Plan" and a "Cultural Resources Management Plan." The two plans documented resource management needs and priorities through a series of project statements which included proposed actions and specific management guidelines for implementation and essential research studies. The plans served park management as manuals for activities that would preserve resources in the park based on approved management objectives, congressional mandates, and NPS policies. The "Natural Resources Management Plan" had four principal objectives:

1. Resource Protection

   a) Maintain or restore the natural systems within the park to those conditions that would now exist were it not for the influence of man since the 1853 Hillman party "discovery of Carter Lake."

   b) Preserve the caldera ecosystem as the principal resource of the Park.

   c) Maintain ecological integrity of native plants and animals as part of the park ecosystem. Permit animal populations to be regulated by natural processes whenever possible. Encourage the reintroduction of native species and prevent non-native species from displacing indigenous ones.

   d) Identify and locate plant and animal species unique to the park or having very limited distribution and control the use or access to habitats of threatened and endangered species.

   e) Implement management fires (natural and prescribed) in designated areas based on research and guidelines provided in the approved Crater Lake National Park Fire Management Plan.

   f) Manage those units of the park recommended to Congress for wilderness designation in accordance with the NPS wilderness management policies and the 1964 Wilderness Act.

2. Information Acquisition

Encourage and participate in efforts to acquire and analyze information through research and other means in order to facilitate development of the best possible management strategies for protecting and interpreting park resources.

3. Interpretation and Environmental Awareness

Foster understanding and appreciation of the natural forces responsible for the evolution of spectacular geological features and diverse ecological communities, and to promote awareness of the natural environment through varied interpretive and educational programs that focus on natural processes and resources.

4. Visitor Use

Assure enjoyable visitor experience through the provision of necessary facilities and services on a year-round basis where possible and in a manner that is compatible with the park's aesthetic, natural, and cultural values.

The "Cultural Resource Management Plan" was the responsibility of the Interpretive Division with guidance from the resource management specialist. Its principal objective was "to identify, evaluate, preserve, monitor, and interpret the Park's cultural resources in a manner consistent with requirements of historic preservation law and National Park Service Policies."[59]

A new Resource Management Plan was approved by Acting Pacific Northwest Regional Director William Briggle on February 28, 1986. The "Natural Resources Management Program" in the plan stated that the park "is primarily a natural resource area, managed in such a manner as to allow natural processes to occur." Nine objectives of the natural resources program were listed:

1. Identify and protect critical resources within the park with the highest priority being those related to the caldera ecosystem.

2. To allow, to the greatest extent possible, natural processes to occur, e.g. wildlife, vegetation, soils, geology, and fire.

3. To foster a public awareness and appreciation for the park specific resources through interpretation and public contact.

4. To gather as much credible and scientifically valid information on park resources, through internal and external means, and to apply that information to management decisions.

5. To monitor activities adjacent or near to park boundaries and to work cooperatively with other agencies to minimize impacts on park resources.

6. To minimize visitor use impacts on park resources through public education and restriction of activities with potential of impact to areas of low sensitivity.

7. To minimize the impacts of park administrative activity by restricting those activities to areas of low sensitivity and concentrating development to pre-disturbed areas.

9. To correct and rehabilitate areas of previous use so as to restore them to natural appearance and processes.

In the plan the park's natural resources were listed in a general priority based on the criteria of resource sensitivity, applicability of federal or state laws, congressional mandates, responsiveness to management programs, and the immediacy of a perceived threat. The priority listing read:

Caldera ecosystem
Rare and endangered species
Air quality
Fire management
Basic resource inventory
Park management and visitor use
Integrated pest management
Livestock trespass
Pumice field management

The "Cultural Resources Management Program" identified four major historical themes for interpretation and site preservation in the park. These were: (1) Northern Plateau Indians; (2) Discovery and Exploration; (3) Conservation Movement to Protect the Lake; and (4) Park Administration.[60]

During the past several years the park has emphasized a new awareness of its cultural resources under the leadership of Superintendent Robert E. Benton. Among his initiatives have been support for nominating the Munson Valley Historic District to the National Register of Historic Places, designating the Superintendent's Residence as a National Historic Landmark, rehabilitating and preserving the historic fabric of the buildings in Munson Valley, performing research on the park's history, and curating the park's extensive museum and archival collections.

As a result of the geothermal exploration program at Crater Lake, vents were discovered on the floor of the lake in 1987. The impact of this discovery will undoubtedly have repercussions on park resource management issues, especially in light of the geothermal features protection section of the Fiscal Year 1987 appropriations bill.

APPENDIX A

CRATER LAKE NATIONAL PARK
STRENGTH OF FORCE PLAN
1946

Legend:

Visibility
V1 - 8 miles or better
V2 - 5 to 8 miles
V3 - 0 to 5 miles

Risk
R1 - all foreseen man-cause
R2 - all unforeseen man-cause
R3 - forecast of locally observed storm
R4 - general or severe local storm

Symbols Used
x - position to be manned and/or action taken without further qualification
V - visibility
R - risk

Specific Action to be Taken	Burning Index Class						
	2	3	4	5	6	7	8-10
Man Watchman and Mt. Scott Lookouts	R-3	X	X	X	X	X	X
Activate Dispatcher's Office	X	X	X	X	X	X	X
Supplement fire protection organization with emergency fire guards	R-4	R-4	R-3	R-3	R-3	X	X
Man all ranger stations	R-3	X	X	X	X	X	X
Man secondary lookouts--Union Peak and Crater Peak--72 hours following thunderstorm	V-3	V-2	X	X	X	X	X
The regular storehouse man and one mechanic held in Utility Area extra hours, weekends and holidays				R-4	R-3	X	X
One regular member of park clerical force held in Headquarters extra hours, weekends and holidays				R-4	R-3	X	X
All ranger and fire protection personnel on standby			R-4	R-3	X	X	X
Naturalist staff on standby				R-4	R-3	X	X
All permanent, seasonal and per diem park employees on standby					R-4	R-3	X
Patrol of main highway system, campgrounds and picnic areas				R-2	R-1	X	X
No smoking while traveling rule put into effect				X	X	X	X
All burning operations to cease after 1 day			X				
No burning operations				X	X	X	X

Specific Action to be Taken	Burning Index Class						
	2	3	4	5	6	7	8-10
Blasting permitted with electric caps--watchman on duty one hour after blasting			X				
Blasting in rock cuts where all debris, humis and trees have been removed permitted with electric caps; watchman on duty one hour after blasting				X			
No blasting prohibited					X		
Close motorway system to all travel and use					X		
Restrict visitor use to main highway system and developed areas						X	X
Contact all local cooperators			R-4	X	X	X	X
Publicity--notify public through evening programs, contacts at entrance stations, campgrounds, etc.				X			
Contact all park contractors and the public operator--notify of danger and request special precautions					X		
Notify Regional Director's Office of conditions and impending danger				R-4	R-3	R-3	X

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CHAPTER THIRTEEN

CONSTRUCTION, DEVELOPMENT, AND PLANNING ACTIVITIES IN CRATER LAKE NATIONAL PARK: 1916-PRESENT

When Crater Lake was placed under the administration of the National Park Service in 1916 construction and development of park facilities became the major components of the park program. During the first year that Crater Lake was under the Park Service three new trails were constructed, all of which radiated from Crater Lake Lodge--one to the boat landing, 1¼ miles, descending 900 feet on a relatively easy grade; one to Garfield Peak, 1¼ miles, ascending 1,000 feet and affording "magnificent views" of the lake and the surrounding country; and one to the Watchman, 4 miles, affording "extraordinary views" of the lake along a winding trail that was passable by horses. Whereas the old trail to the lake had been narrow, steep, and subject to washouts, the new trail was constructed "with the idea of making it possible for men, women, and children of all ages and conditions of health to get down from the rim of the crater to participate in the sports of boating and fishing on the lake itself." The trail, according to Mather, would "result in lengthening the stay of every visitor to Crater Lake Park."

Road construction and improvements in the park, which had been underway for several years, continued under the National Park Service. In 1917 Superintendent Sparrow reported:

> A few years ago an appropriation was made by Congress for the survey of a comprehensive system of roads within the park, the main feature of which consisted in a road entirely around the lake, close to the rim whenever possible. This survey was made under the direction of the Secretary of War, two seasons being required to complete it, and a report thereon was submitted to Congress, estimating the total cost, including $65,000 for a sprinkling plant, at approximately $700,000, and recommending that it be placed under the continuing contract feature in a manner similar to certain harbors. Of this amount an appropriation was made of $50,000 for use during the season of 1913, $75,000 for 1914, $85,000 for 1915, $50,000 for 1916, $50,000 for 1917, and $50,000 for 1918, making a total to date of $360,000.

> Under these appropriations grading has proceeded steadily, resulting in the reconstruction of old roads and the building of new ones, until at this time there are 51 miles of well-constructed dirt roads in use, leaving 6 miles of construction for the season of 1918, when the road around the rim will be complete, providing an excellent highway that will soon become famous throughout the world for its unsurpassed scenic beauty and grandeur.

Despite the progress in road development Mather felt that all roadwork at Crater Lake and other Park Service areas should be carried out under the direction of the Department of the Interior rather than the War Department. This would insure

> that uniform policy in the improvement of all parks may be formulated and followed and for the further reason that it is most desirable to have all park roads maintained for the benefit of the tourist solely and with his interest constantly in mind.

In addition to the development of roads within the park, Mather devoted considerable attention to the problem of adequate approach roads to Crater Lake. In 1917, for instance, he reported:

> The roads leading to the various gateways of the park from Medford, Klamath Falls, and Kirk, Oreg., have not been in good condition during the past season. The road from Medford to the park boundary, a total length of 72 miles, was not built as an automobile road in the beginning and must be largely reconstructed. Jackson County and the citizens of Medford have spent large sums of money in improving sections of this road, and their work is of such a permanent character that the surfacing of their improvements is all that now remains to finish them. It is a fact that Jackson County and its citizens have aided in the improvement of this road to the limit of their capacities, and the time has now come when the State of Oregon and the Federal Government must combine to permanently improve this main highway into the park. It is my understanding that the State of Oregon has already arranged to cooperate with the Federal Government and that the basis of Federal assistance under the good roads act is all that is necessary to be determined before improvement work is begun.

> If a satisfactory basis can not be determined within a short time, it would seem that a new plan involving direct appropriations by the Federal Government and by the State for the purpose of rebuilding the approach roads, not only from Medford but from Klamath Falls, in connection with the intrapark system, should be devised. It must be understood that the counties of southern Oregon can not possibly build these approach roads or even keep them in repair. They can not raise sufficient funds by subscription or taxation--Jackson County, in which the Medford approach road lies, has already reached the limit of its authority to bond itself for road-building purposes. . . .
>
> A park tour, including a trip over both the Medford and Klamath Falls roads--that is, in one gateway and out the other--is and should be the favorite way of seeing this park. The road up the Rogue River Canyon on the Medford side is interesting on account of the volcanic origin of the canyon itself and beautiful because there is so much timber and so many vistas of far-scenery visible between the trees. On the other hand, the road down from Crater Lake to Klamath Falls through the Klamath Indian Reservation and along the shore of Klamath Lake is a scenic road of the highest order.

Utility systems in the park also received considerable attention by the National Park Service in 1917. Superintendent Sparrow described the operation and proposed changes in the telephone system to better serve park operations:

> The National Park Service controls 20 miles and the United States Engineer Department controls 34 miles of telephone lines in the park. All service in the park is free. Government messages are transmitted free over 9 miles of commercial line to Fort Klamath, in exchange for 50 per cent of the revenue from private calls to or from the park. The revenue from this service is small and necessitates a switchboard at park headquarters. A movement, however, is under way to obviate the necessity of this switchboard. The United States Engineer Department also has 14 miles of line from the east entrance of the park to Kirk, at the end of the railroad. Considering the temporary construction of much of these lines, the service is very good.

Echoing the earlier recommendations of William G. Steel, Sparrow indicated the need for installation of a water system on the rim near the

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lodge "for the use of campers and for other purposes." This water supply was "of the utmost importance" because, according to the superintendent, only "through the generosity of the Crater Lake Co. in furnishing water to us were we enabled to establish a construction camp of 25 men on the rim instead of 1 mile distant from our trail work."

During 1917 two ranger cabins were constructed at the east and west entrances of the park to complement the existing cabin at the south entrance. The ranger cabins were formally styled log structures that bear a striking relationship to later, purposely rustic, park structures. A photograph of one of the cabins was included in the *Annual Report of the Director of the National Park Service* with the caption that the structure was illustrative of the type of ranger station adopted for the park. Although the highly stylized appearance of the two cabins suggests that either a landscape architect or an environmentally-sensitive architect played a role in the buildings' design, research has not been able to confirm this supposition.[1]

On May 13, 1918, Secretary of the Interior Lane sent a letter to NPS Director Mather, articulating a general policy statement to provide a sound basis for the administration and development of the National Park System. The policy statement detailed the parameters that would govern future construction and development in each unit, including Crater Lake, in the embryonic system. The statement emphasized the necessity of environmentally-sensitive construction, design, and development in the parks:

> In the construction of roads, trails, buildings, and other improvements, particular attention must be devoted always to the harmonizing of these improvements with the landscape. This is a most important item in our programs of development and requires the employment of trained engineers who either possess a knowledge of landscape architecture or have a proper appreciation of the esthetic value of park lands. All improvements will be carried out in accordance with a preconceived plan developed in special reference to the preservation of the landscape, and comprehensive plans for future development of the national parks on an adequate scale will be prepared as funds are available for this purpose.[2]

Park development continued at Crater Lake in 1918 under the watchful eye of Mather and the immediate supervision of Sparrow. In his annual report that year Mather reported on the progress that had been made in improvements to roads, campgrounds, trails, and facilities in the park to enhance the qualities of the visitor's experience:

> . . . Negotiations extending over a considerable period of time finally resulted, during the early spring of this year, in the approval by the Secretary of Agriculture of a cooperative agreement covering the development of these [approach] roads [from Medford and Klamath Falls]. The Federal funds to be made available will come from appropriations authorized in the Federal aid roads act for national forests. No reconstruction work will be done during the war, but the project is to be undertaken immediately upon the return of peace; in other words, the project is a preferred one. The rebuilding of these forest roads and the completion of the Rim Road by this Service will give Crater Lake National Park merited importance as an objective for motor travel.
>
> Congress appropriated $50,000 for the completion of the grading of the Rim Road, but it is not likely that the work can be finished this year. Of the total of 35 miles, the 14 miles between Cloudcap and Watchman must be improved. Increased labor costs, difficulties experienced in securing men, and other obstructive influences have contributed to the situation. It will probably require $7,000 to complete the work. The Corps of Engineers of the Army will authorize its transfer to the National Park Service in the next sundry civil bill. It is clearly the intent of Congress that all work of maintaining the system shall be intrusted to this Bureau, and as there is little to be done to complete the Rim Road it seems hardly necessary to require the Corps of Engineers to organize another field party next year when the superintendent of the park can handily perform this work at much less expense. The economies attending the combination of engineering and administrative office forces, the establishment of single management et cetera should also be considered at this time.
>
> The public camp grounds on the rim of the crater were greatly improved during the summer season. A large tank and pumping equipment have been purchased and will soon be installed for the purpose of supplying water to campers on the rim grounds which are located a short distance west of the hotel in a beautiful alpine park area commanding a wonderful view of the lake. Heretofore, water has been taken from the very inadequate hotel supply. The camp grounds will be equipped with shower baths if the water supply can be developed as expected. In this park, as in all others, special attention is

> constantly given to maintaining public camp grounds in a thoroughly sanitary condition.
>
> The accessibility of the new Rim Road, and all of the new trails from this camping area on the rim of Crater Lake should make it one of the most popular camping grounds in the national park system, and should attract the pedestrian and horseman as well as the motorist.
>
> The splendid new trail from Crater Lake Lodge to the shore of the lake, one of the important improvements of last year, has given pleasure and refreshment to thousands, and, as we expected, elderly people and visitors wholly unaccustomed to climbing availed themselves of the opportunity to make the delightful trip from the lodge to the edge of the lake, thence in motor boats around the lake to Wizard Island and the Phantom Ship, and to other points of interest. The new trails to Garfield Peak and the Watchman were also exceedingly popular during the past season. A trail to the summit of Union Peak is now under construction and will be finished before the park is closed for the winter.[3]

The unsurfaced 35-mile Rim Road was completed, with the exception of eight miles that required further widening and grading, and opened to the public on August 2, 1918. Later that month Mather made the trip around the lake, pronouncing it "a wonderful scenic tour" and the "most important feature in the development and administration" of the park during the year. Mather went on to state that the "road is one of the finest scenic highways of the world." Not only were the "views of the marvelous lake superb and unique, but the glimpses of the surrounding region that falls away from the crater are only slightly less sensational." In order to provide the visitor with "even more thrilling views of Crater Lake or the adjacent mountain region than that afforded at the points where the Rim road overlooks cliffs of the crater," new trails had been built from the road to Sun Notch and Crater Peak.

By an Act of Congress of July 19, 1919, the road engineering work in Crater Lake National Park was transferred from the Corps of Engineers to the National Park Service. All property and equipment of the corps that had been purchased with park funds were delivered to the Park Service, and anticipating the transfer the corps placed the direction of the improvement work under Superintendent Sparrow at the beginning of the 1919 summer season.[4] With the transfer of this engineering work the National Park Service, according to Mather "gained complete control of the last national park in which authority was divided between it and the War Department."

With the completion of the Rim Road Mather focused his attention on two problems relating to roads both inside and outside the park. A permanent paving program was needed on park roads to prevent dust problems, insure more economical maintenance, and make them more durable. In this regard Mather observed:

> Because of the nature of the soil in Crater Lake National Park, which in many places is either a volcanic ash or volcanic sand, in many stretches of the road natural surfaces are impossible to maintain. Where the road surface is a volcanic-ash soil it rapidly breaks up under automobile travel and becomes a finely pulverized and almost impalpable dust, which, when dry, flows much like Portland cement, filling the ruts and chuck holes so that to the eye they appear fairly smooth, yet offering no cushion to absorb the shock of the rut or chuck hole. Much of this dust is puffed into the air by the wheels of the automobile, where it remains in suspension for a long time, filling the eyes and nostrils of the occupants of automobiles, and often obscuring the view.
>
> The sandy soil is of a very friable nature and impossible to pack or consolidate, and as a result many automobiles get stuck when these sandy stretches occur on hills, as is the usual case. That these conditions would exist was known in advance of the construction of the road system, for the roads at Crater Lake were built by the Engineer Corps in accordance with the scheme or project outlined in House Document No. 328, Sixty-second Congress, second session, in which provision was made for surfacing the entire system of roads with macadam, and the construction and maintenance of a sprinkling system to keep the macadam roads in repair and free from dust. During the first season of actual road construction short stretches of experimental road surfaces were laid, and it was developed that an oil-bound macadam, which was about as cheap as water-bound macadam, satisfactorily withstood travel demands, while the water-bound macadam did not.
>
> Much of the 57 miles of road constructed is in material that with a reasonable fund for maintenance can be kept in a fair condition for travel, but perhaps half of this mileage is in need

> of permanent surfacing, which is the best and only economical method of maintaining it. Certain short sections of the road that are in most need of surfacing should be surfaced each season until all of the bad sections are thus improved, and in line with this idea I have included in the estimate for 1921 an item for surfacing 3 miles most in need of this treatment.

The other continuing concern of Mather was the deteriorating state of approach roads to the park. Now that World War I was over and federal and state funds were again available he wished to see the approach roads quickly rebuilt or repaired in order to develop Crater Lake "as a resort for motorists." Particularly disturbing to Mather was the poor condition of the state road leading to the park from Medford. He observed:

> . . . The section around Prospect was the worst part of the highway. The State is now working in this region on an entirely new road, but little was done to keep the present road in anything approaching proper usable condition. With the very heavy travel of this year it became deeply rutted and terribly dusty.

While road development was the principal concern of park management in 1919, other park development projects were also undertaken. One of the first to be completed was the installation of a water supply system for the convenience of campers at the rim. According to Superintendent Sparrow the new system "justified itself in the comfort provided for visitors and the growing popularity of the campground."[5]

A variety of physical improvements were carried out in the park during fiscal year 1920. One of the major projects consisted of cutting brush to a width of eight feet around the 65-mile park boundary. All trees in this strip were blazed on two sides. This was done to eliminate arguments with stockmen and poachers as to the exact location of the park boundary and to provide for a fire break around the park perimeter.

Improvements were also made to the Rim Campground. It was found necessary to enlarge the water reservoir at the rim. Thus, a third 5,000-gallon tank was installed in the tank house, providing an ample water supply for the campground for many years to come. Additional toilets were built at the Rim and Lost Creek campgrounds, and preparations were made to install toilets at the boat landing on the lake.[6]

A variety of park development projects were carried out in 1921 that were designed to enhance visitor enjoyment of the park. On August 25, 1921, the Scenic America Company, headed by Fred H. Kiser, erected a stone studio west of the lodge for the display of pictures and paintings of scenic features of the park. The structure was hailed as "a splendid addition to the rim village" that harmonized "perfectly with its surroundings." Other improvements that year included construction of a new crib dock to which a raft or floating dock was attached at the boat landing on the lake, extension of water lines, and provision for better sanitation in the public campgrounds. A public comfort station, complete with toilet, lavatory, and shower bath facilities, was erected at the Rim Campground. The station was constructed of stone to harmonize with the lodge and Kiser Studio.

Provision was also made for warehouse/storage facilities in the park during 1921. The temporary warehouse, built during the construction of Rim Road two miles east of Wineglass, was moved to Wineglass Camp to store equipment during the winter. Another temporary building north of Llao Rock, also constructed during the Rim Road work, was moved to the Devils Backbone vicinity to be used for storing plows, scrapers, and similar equipment during the winter months.

The continuing efforts of Mather to have the federal and state governments improve the approach roads to the park from Medford, Klamath Falls, and Bend finally resulted in substantive action in 1921. Highways leading to the park, according to Sparrow, were "undergoing extensive reconstruction, or being relocated and entirely new roads, on better grades, being made." The status of the entrance roads was:

> ### WEST ENTRANCE
>
> The road from Medford to the west entrance of the park, 69 miles has been greatly improved within the last year. Forty miles of this road has been surfaced with crushed rock, and with the exception of 6 miles will all have been relocated and reconstructed by the end of the present working season.
>
> ### SOUTH ENTRANCE
>
> Of the 50 miles of highway between Klamath Falls and the south entrance to the park, 20 miles have been macadamized within the last year, and the remaining 30 miles are being prepared for macadam or gravel.
>
> ### EAST ENTRANCE
>
> Construction work is underway on 40 miles of the 108 miles of highway between Bend and the east entrance to the park.
>
> ### NORTH ENTRANCE
>
> A 16-foot road has been constructed by the Forest Service from Diamond Lake to the north boundary of the park, and when the road building schedule of the State is completed this will be an important entrance to the park.[7]

Throughout the mid-1920s development projects at Crater Lake were concentrated on improvements to road, trail, and utility systems and construction of facilities designed to improve visitor services and park operations. In 1923, for instance, Mather reported on improvements that had been made to the park approach roads and the need to bring the park roads up to those standards:

> A most gratifying development has been the notable improvement of approach roads to the park. The Crater Lake Highway out of Medford is now nearing completion and by next season will be widened and surfaced to the park gate. The work on the Klamath Highway has been similarly pushed even more energetically. Construction of The Dalles-California Highway is being carried along rapidly, so that within two years it will be a most important approach highway.
>
> The unprecedented traffic over our own 57 miles of roads punished them severely and while they were maintained as something better than passable the time has come when

> surfacing is imperative. Oregon has spent and is spending tremendous sums to bring visitors safely and comfortably to the park gate, and in simple justice to all concerned the Federal Government must hold up its end. All three entrance roads contain stretches of volcanic dust which rut deeply and dust up miserably but which can be surfaced at comparatively small cost. The improvement of these stretches together with the light graveling of about 25 miles of the park road system is not only an immediate need but an absolute obligation. . . .

In addition to the roadwork a variety of new construction projects were carried out in the park during 1923. Among the most important, according to Superintendent Thomson, were:

> A standard combination mess hall and bunk house was erected at Lost Creek, and firewood stored in it at the close of the season for the use of preseason visitors next year. Two new toilets complete with lavatories were erected at the Rim auto camp ground, and two oil-burning water heaters installed in the new comfort station, so that hot shower baths were available all season. A large septic tank was also constructed at this camp ground. Two similar toilets were constructed at Anna Spring auto camp ground. A large barn was constructed at Anna Spring, a highly satisfactory type of building provided with kicking bars and hinged mangers, an arrangement permitting of its conversion in 15 minutes into a warehouse for winter storage of trucks and other large equipment. Two 20,000-gallon water tanks were installed at the Rim auto camp. A 70-foot log boat landing was constructed at Wizard Island. A rustic screen was erected to eliminate clotheslines from the Rim landscape. Over a thousand feet of pipe was laid in various camp grounds. Sixty new signs were painted and distributed. A new bear-proof meat house was constructed at Government Camp. A large latrine was built at Government Camp.[8]

The year 1924 saw the completion of the western and southern entrance roads to the park and improvements to the eastern entrance approach road. Superintendent Thomson reported:

> The year saw the completion of the Mile-high Highway between Klamath Falls and a point 6 miles below Ashland on the Pacific Highway. This fine macadam highway, together with the equally well maintained highway between Klamath Falls and our south entrance, was used by a greatly increased proportion of Park visitors.

> The McLeod Cascade Gorge section of the Crater Lake Highway out of Medford to our west entrance was completed this year. This road is now completely widened and is surfaced except for the 6-mile stretch between Silver Camp and our west entrance.
>
> The Dalles-California Highway is completed from Klamath Falls to a point beyond intersection with the 4-mile spur connecting with our east road; northward toward Bend, however, it was bad going.

In addition a number of construction/development projects were commenced in the park during 1924. New trails were constructed from White Horse Bridge to the Nutcracker and from Government Camp in Munson Valley to the Lady of the Woods. Telephone service was improved by the installation of four high-power instruments and construction of a parallel line between Anna Spring and Government Camp, making two simultaneous conversations possible. A wing was added to the log cabin (built several years earlier by the U.S. Corps of Engineers) used as the office of the superintendent at Government Camp to provide additional space for a general office, enlarged registration and record-keeping facilities, and an information desk area. This latter project was in line with the park's long-term objective of moving all administrative offices and park operations activities from Anna Spring to Government Camp (which would soon become known as park headquarters) because of its relative proximity to the visitor facilities at the rim. A Community House was constructed at the Rim Campground using funds that had originally been appropriated for a new superintendent's home. The structure was designed to provide a setting for dancing, lectures, and other visitor entertainment.[9]

Paltry park appropriations permitted little new construction in the park during 1925, with the exception of projects to improve the south and west entrance roads to the park. This work was described by Superintendent Thomson:

> . . . The 6.8 miles of the Medford entrance was realigned, grades and curvatures reduced, and two bridges replaced with

> fills; the 8.1 miles of the Klamath entrance was also corrected and similarly freed of unnecessary hazards. A penetration macadam pavement, 16 feet wide, was laid over about 8 miles--a dustless road bed that will transform park travel. It is expected that the 18.3 miles authorized will be completed before mid-season next year, providing pavement as far as Government camp. This work was carried on with a minimum of detours.

Other than these road projects new construction was limited to the building of a garage and considerable improvements to the park telephone and sanitary systems. The latter included construction of a new comfort station and septic tank and laying of a new 2,700-foot 4-inch pipeline from the pumping station to the rim tanks.[10]

In 1926 National Park Service engineers revised the road program for the park that had been devised by army engineers some years before. The new plans were coordinated with the Bureau of Public Roads, which took over road construction in the park on January 1, 1926, with District Engineer C.H. Purcell of Portland in charge. The revised plans provided for improvement of existing roads by regrading, resurfacing, and realignment."[11]

Upon the joint recommendation of the district engineer and the park superintendent road surfacing at Crater Lake was changed from penetration-pavement to crushed rock macadam treated with light road oil. This change was made primarily in the interests of economy. Both the west and south entrance roads were thus surfaced by August 10. A "thorough clean-up of the debris incidental to road construction was effected to a distance of 75 feet out from the ditch slopes." Thus Mather was able to report "that these two roads are now dustless and the entire right of way rid of all debris, giving grasses and wild flowers opportunity to bloom--a tremendous improvement over former conditions." Simultaneously, parking areas were widened and guard rails installed, "bringing these roads up to high park standards."

The 6.5-mile stretch of highway between Silver Camp and the park's west entrance was macadamized with state and federal funds. This completed the hard surfacing of the "Crater Lake Loop Road," extending some eighty miles from Klamath Falls to the Pacific Coast Highway several miles south of Ashland.

Construction of a new road from Government Camp to the lake rim on a 6.5-percent maximum grade with a minimum curvature radius of 100 feet was completed by the autumn of 1926. The elimination of the former road with 11-percent grades with its steep and hazardous turns was, according to Mather, "a great step forward." The road terminated at the rim "at a spot selected by the landscape division" that provided "a spectacular first sight of the lake and the crater."

That same year a 65-foot rustic bridge was constructed across Goody Gulch at Anna Spring. This span greatly improved alignment by eliminating three "bad curvatures," facilitated traffic, and permitted the gradual restoration of the spring area.

Continued low appropriations limited park construction items, other than roads, to $3,800 in 1926. Of this sum, $3,000 was spent on the construction of a small warehouse at Government Camp. This rustic structure was described as "an attractive building of rough stone walls, with second story of rough boards, battened with shake roof." According to Superintendent Thomson, this was "the type of building evolved for use in all future construction here, and is the first building of the utility group planned for headquarters at Government camp."

Several other construction projects were also carried out in the park during 1926. A fire lookout station was built on Mount Scott, following plans developed by the U.S. Forest Service. New telephone lines were constructed from Government Camp to the south and west entrances and from Lost Creek to the lookout on Mount Scott--a total of 26 miles of new telephone line.[12]

Efforts to finalize the first parkwide long-term development plan for Crater Lake were undertaken during the summer of 1926. The planning endeavor, which had been under discussion for several years, was headed by Thomas C. Vint of the NPS Landscape Division based in San Francisco. In July Vint informed Superintendent Thomson that the plan was "ready to be put into a definite form," pending approval by the Washington Office. The key elements of the plan, most of which would receive Mather's enthusiastic endorsement, related to development of concession facilities and development at the rim, Government Camp, and Anna Spring.

Vint presented the essential points of the plan and the rationale behind the planning decisions to Thomson on July 31. Relative to park concessions he stated:

> Summarizing the present tourist facilities in the Park we find that we have an unbalanced program at present. We are furnishing the two extremes, namely, the American plan hotel which is the most expensive type of service, and on the other hand, the free Government auto camp, which is at the other end of the list of tourist facilities found in the parks. . . .
>
> There is no question that at Crater Lake there is a demand for a less expensive type of service than can be obtained at the hotel and, due to the fact that auto camps are provided enroute to and from the Park which the tourist can depend upon to get a cabin at a relatively low cost, this condition brings many who are not outfitted to stay in our free auto camps and who do not desire the more expensive type of service furnished by the hotel.
>
> Reviewing our discussions of the next step taken in providing additional tourist facilities at Crater Lake we felt that the housekeeping type of camp should be the next step, this to go adjacent to, and possibly include some of the land within the present Rim auto camp. The hotel with the additions planned should be sufficient for this type of service at this Park for some time. The American plan tourist camp or Howard Hays camp would be the last step as the present Rim area could be divided between the hotel and the housekeeping unit by including in the hotel plan a cabin unit and possibly at the housekeeping unit developing two classes of service. When the day arrives that it is necessary to open a new area on the Rim such as Kerr Notch or possibly near Centinal Point, the

> American plan camp would be the logical unit to place there. The headquarters unit of the housekeeping camp would include the store, studio, and cafeteria or lunch room service for the entire Rim area.
>
> Due to the limited amount of usable ground we will have to limit the number of facilities at the Rim as far as possible. For this reason the gasoline service station will be located at Government Camp.

Vint proceeded to detail the development plans for the rim, Government Camp, and Anna Spring. Concerning the rim area he observed:

> . . . The new road approach which will be completed next season is one of the most powerful factors, having an influence on the general layout. Coming in at the western end of the area, traffic can be handled and distributed much easier than it is from the present approach.
>
> The circulation system in our plan calls for a Rim-way walk with a dustless surface behind which would be the road way and parking area. After designing all necessary road ways and walks the intervening unused ground can be provided with a ground cover or other plant growth to stabilize the dust. The Rim walk will be one of the most important units of the Rim area development and its center of attraction will be at Victor Rock. The Kiser Studio now stands at the head of the trail leading to Victor Rock and in my mind stands on ground which should be given entirely to public use. With the studio moved to another location a far better development can be made at this point. The studio is now too small for present business and Mr. Kiser is already talking of an addition which will increase the volume of the building about three times. I realize that it is a difficult situation to move a concessionaire from such a strategic point, especially after he has been established there for a number of years. However, since we are just making the ultimate plan for the development of this area and since the concessionaire is planning additions on the present site, I believe that the present time will be our only opportunity to make the change and recommend that we sound out the Service and Mr. Kiser. The present Community House was too small the day it was finished but has served very well as a feeler for the type of structure needed at the Rim. It is of frame construction and necessarily not a long-lived type of structure. You and I have decided to use a more permanent type of structure for all government buildings throughout the Park and as it will soon be necessary to make additions to the present community house I recommend that we work for a new building

> of larger dimensions and of a permanent type of structure, leaving the present building for other uses.
>
> The housekeeping camp cabin unit I believe will best fit at the western end of the present auto camp and its headquarters building would necessarily be at that end of the Rim development.
>
> I have in mind using the open desert area to the west of the Community House for a plaza development on which the new community house, the housekeeping camp headquarters with the general store and the Kiser Studio would form a unit of three buildings. This area places the buildings in a central location to serve the auto camp, the housekeeping camp, and those who come up to the Rim for the day, making it a logical location for the center of Rim activities. Furthermore, it places the unit sufficiently back from the Rim. The hotel leased area would stay as it is and will be beyond all other activities in the area.

Relative to the government camp area Vint noted:

> The new road location through Government Camp which was decided upon last November makes a considerable change in the arrangement of the government general plan as we discussed it, a year ago. Now, the administrative unit will face a plaza adjacent to the present administration building, the utility group, and go in the trees to the west of the administrative area in the auto camp which was abandoned last season. The residence unit will go back of and above the present messhouse. The gasoline sales station will go in the junction of the Anna Spring and East Entrance road. At some future date a utility area for concessions may be developed in the trees to the south of the administrative unit on the site which we decided upon in the old plan for the Government utility site. This procedure may be necessary, due to the limited amount of usable ground and the limited water supply at the Rim area. This season we are building the new warehouse and have located it as the first building to go in the new utility site.

Vint had the following observations about the Anna Spring area:

> The Anna Spring development is one of decreasing rather than increasing of facilities. The new road alignment provides the bridge across Anna Creek and a surfaced plaza area. The gasoline service station will be removed to Government Camp and the store abandoned at the end of this season. This will eliminate several structures, namely, the gasoline station and the cabins for Standard Oil employees, and the Anna Spring store buildings. The government development of that area is practically complete, includes the Superintendent's residence and a small utility area, road crew quarters, warehouse, and barn, and a ranger station. The Superintendent's residence

> and the utility group are as they will be for several years to come. The condemned white barn was razed this season and on the completion of the new ranger station the present obsolete type of building now in use can come down.[13]

In his annual report for 1926 Mather remarked upon the long-term development plan for the park. He noted that the "plan of development at Crater Lake is fortunately compact and simple and, as funds should become available soon, it is hoped that a five-year period will see development at this park completed except for camp ground developments, the limits of which can not be foreseen."[14]

The comments by Mather concerning the need for appropriations to carry out the development program are interesting in light of a general statement on the poor condition of existing park facilities prepared by Superintendent Thomson in 1926. The statement was prepared to justify higher park appropriations requests from Congress. The statement contained the following observations:

> There is a good hotel but approximately 90% of Park visitors fend for themselves, throwing very heavy loads upon our 10 camp grounds in the way of water supply, garbage disposal, sanitation, fuel, and policing. There is a stage concession, but 99% of our visitors arrive in their own automobiles.
>
> The administrative problems involving future expenditures are, principally: housing of employees; storehouses; a slight increase in personnel; water supply and sanitation; and the continuing of road improvement. A construction program of $35,000 per annum for 5 years should adequately provide for all predictable requirements. . . .
>
> Heretofore, Crater Lake National Park has been rigidly limited to 2 or 3 minor structural improvements annually; appropriations have lagged far behind proportionate increase of travel and functions; improvements have been few and on a scale to barely gather up the slack here and there. Structures are nearly all ramshackle, built years ago to meet the temporary needs of road gangs engaged in 1913 to 1917 in road construction; these buildings have long outlived their usefulness and must be replaced with modest structures in keeping with new requirements and harmonious design. Consequently, 1926 finds Park facilities, as a whole, materially behind demands in every department.[15]

The NPS Landscape Division developed further plans in 1926-27 to provide for "naturalization" of the rim area. Until that time parking along the rim was unrestricted, the common practice being for motorists to park their automobiles anywhere they desired. The result of indiscriminate parking and heavy pedestrian traffic, along with the poor, sandy condition of the soil, rendered the entire area between the road and the rim "an unattractive sand waste." The soil was composed of a high percentage of volcanic pumice which was constantly shifted by the wind. Thus, it became the goal of the NPS Landscape Division to restore the rim area, especially between the foot of Garfield Peak and the cafeteria, so that it would resemble "much of its original beauty" and be in harmony with its natural surroundings. It was the goal of NPS landscape engineers that the area be planned "so that thousands of visitors" could use it "without further permanent damage" to its inspirational beauty.[16]

Meetings were conducted in 1927 to implement the development plan for Crater Lake. The discussions were attended by NPS Assistant Director Horace M. Albright, Superintendent Thomson, representatives of the Bureau of Public Roads, and various officials of the National Park Service. As a result of the meetings Thomson observed in his annual report that this

> year Crater Lake stood just at the cross roads between the old and the new; the removal of the last "teams have right-of-way" road sign was a symbol of the progress that is gradually bringing this Park nearer the standards imposed by modern conditions. When plans, now underway, are completed this Park will possess a well-rounded layout.

During the summer of 1927 Thomson approved plans for the development of the rim area and for "reclaiming the Rim Area from its present oppressive dustiness to a semblance of nature." The plans provided that the park concessioner would construct and operate a badly-needed cafeteria and general store. A small group of rental cabins would be built, the structures to be extended as needs developed. These structures would occupy "a small desert in the campground, not otherwise useable, in line with our firm policy to protect the Rim from additional structures."

The plan for "naturalizing" the rim area provided for an asphalt trail to be laid "along the edge of the Rim the full length of the Village." Between this promenade and a park treatment the soil was to "be restored to natural grasses and wild flowers." A wide parking area alongside a thirty-foot dustless road was "designed to distribute visitors perfectly." As most park visitors spent virtually all of their stay at the rim, the "bringing of this area into orderliness" was, according to Thomson, "probably the most desirable single improvement possible at this park."

As steps were commenced to implement these plans a variety of new construction projects were undertaken in 1927. That year the park received its largest appropriation ($29,100) to date for physical improvements.

The most notable construction project during 1927 was the building of a new trail down the crater wall to the lake, thus replacing the old trail with its narrow bench and grades of up to 28 percent. The new trail had a minimum bench of six feet and a maximum grade of 15 percent with a holding grade of 12 percent. The new trail was safe for the use of mules and burros, thus making the lake accessible to people who had been denied that pleasure previously because of the hardship of walking up the crater wall. The new trail began at a more accessible point on the rim and terminated on the lake shore on a natural bench, affording ample room for docking, sanitation, and visitor movement.

A variety of other structures were also completed in the park during 1927. These included a pumping plant, pump house, and concrete reservoir to serve Rim Village, an employee's cabin and comfort station at Government Camp, a superintendent's residence (Queen Anne style) at Medford designed by John B. Wosky, future park superintendent, a rest house at the foot of the new crater trail, and a barn that was convertible into a truck shed for winter storage. Anna Spring Bridge, a heavy peeled hemlock structure, was also completed. All of these structures were built of stone walls with a rustic superstructure, an architecture, according to Thomson, that was "practically permanent and highly appropriate."[17]

Development work at Crater Lake reached new heights of activity in 1928 under the direction of Ward P. Webber, an assistant engineer from the NPS Engineering Division office in San Francisco. Six principal projects were undertaken: (1) roadside cleanup and landscaping between Anna Spring and the rim; (2) oil processing/surfacing of three roads; (3) grading and surfacing of a new road to Rim Village; (4) construction and paving of the Rim Trail Promenade; and (5) reconstruction/realignment of the Crater Wall Trail.

The roadside cleanup and landscaping project between Anna Spring and the rim was designed "to give a clean and pleasing effect when viewed from the traveled road" and to clear combustible material from the roadside and thus reduce the danger of having a fire start from a carelessly thrown match or cigarette. The average crew consisted of a foreman, one or two teams with drivers, two men blasting stumps, and from four to eight axemen.

Prior to 1928 landscaping in the park had been accomplished primarily in connection with the design and construction of buildings and bridges. In pursuit of the announced objective "of eventually restoring the park landscape to its original state as far as practicable," landscape improvements were conducted at Cold Spring, Anna Spring Plaza, Anna Spring Dam, and the Rim Village area. According to Webber, the work at Cold Spring "transformed an excellent spring of cold water from a bog hole to an attractive improvement to the park by collecting the ground water in tile drains and bringing it to a central [rock-walled] basin" with "an overflow outlet provided." The area surrounding the Anna Spring Plaza, formed by the junction of the roads leading to the west and south entrances and rim, was graded in preparation for seeding the ground with native grasses and plants. The work at Anna Spring Dam consisted of constructing a new rubble and masonry dam to replace a plank dam, removal of the rams beneath the highway bridge, and burying the pipes to provide "a more efficient installation as well as greatly improving the appearance of the spring."

Three park roads received surfacing/oil processing treatment in 1928 under the direction of T.R. Goodwin, a road oiling expert loaned to the National Park Service by the California State Highway Commission. All told, 10.5 miles of oiled surface on the west entrance road to Anna Spring were reprocessed and 7.1 miles of crushed rock surface on the south entrance road to Anna Spring were finished by oil processing. The road grade from Anna Spring to the rim which had been completed in 1927 was surfaced with crushed rock and oil processing.

The projects at Rim Village consisted of grading and surfacing, construction of a promenade, and major work on the Crater Wall Trail. Improvements in the rim area consisted of grading and leveling the site for the cafeteria/general store building, changing the grade and alignment of the Rim Village Road, completion of the loop parking area at the lodge, removal of undesirable knolls, and filling in washes adjacent to the road. A heavy log railing was placed along the edge of the road and parking areas. The promenade consisted of a concrete walk 8 feet wide and 2,525 feet long, running along the rim from the lodge to a point approximately 380 feet north of the head of the new Crater Wall Trail. While the trail clearing and grading had been completed the year before, a crew of twelve men was hired to widen and lengthen each of the twenty switchbacks, build retaining walls and parapets, and place log seats at convenient intervals for resting.[18]

Several structures were completed in the park during 1928. A frame warehouse and garage were constructed in winter headquarters at Medford, thus permitting the off-season conditioning of park equipment. Two small two-story, two-bedroom employees' cottages were constructed at park headquarters, the structures having stone walls with rustic superstructures. A new ranger station was constructed at Anna Spring, described by Thomson as "an appropriate structure of logs to match all of our other ranger stations." A new Standard Oil Company service station at the road junction below park headquarters was opened to the public. Near the rim a rustic stone cafeteria/general store, together with twelve rental cabins, were built but not completed in time for use during the season.[19]

In his annual report for 1928 Mather was particularly pleased with the development projects in the rim area. He observed:

> This vital Rim Area was opened at its west boundary by the completion of a new road, built on high standards of grade and curvature and emerging at the Crater edge at a point which gives the visitor a first breathless view of the magnificent spectacle. From this point a new road was completed and oiled that distributes traffic in turn to the new cafeteria and cabin group, to the camp ground or finally to the hotel at the opposite end of a half-mile plaza. On each side of this boulevard an eighteen foot parking strip was provided, which will accommodate several hundred cars. Along the very edge of the Crater rim a wide asphalt promenade was constructed for pedestrians, and the intervening area between this dustless trail and the log parapet which limits parking alongside the boulevard there was graded an area of variable width which will be restored to native grasses and wild flowers. The general effect of this development is a diminishing of the dust evil, greatly improved parking and traffic problems, and a bettered landscape.
>
> The simultaneous completion of the new cafeteria and group of rental cabins, together with the new Crater Wall trail taking off from the west end of this area, rounds off this development. The new trail to the lake was constructed on high standards to permit the use of saddle animals, enabling many thousands to enjoy the lake who were heretofore denied that pleasure by physical incapacity.[20]

Construction and development projects at Crater Lake continued to be under the direction of Engineer Webber in 1929. The old ranger station at Anna Springs was torn down and removed. A new checking kiosk was constructed at Anna Spring, and the combination bunk and mess house at Government Camp was completed. The Mess Hall, as the building came to be called, housed kitchen and dining facilities and living quarters for seasonals. The latter building replaced a log structure that was removed, thus contributing to "a vast improvement to the landscape and efficiency of Government camp." Park day labor crews constructed a new sewage disposal system at the park headquarters, consisting of a sewer line running from the utility area to an underground septic tank.[21]

A large appropriation of $94,400 for roads and trails permitted considerable construction in the park during 1930. Superintendent Solinsky reported that the following projects were undertaken:

> Construction of the stone parapet along the lakeside of the rim promenade has been started and the work is progressing satisfactorily. When completed it will add very materially to the appearance of the rim area and will serve as a barrier to confine the people to the promenade.
>
> A parking area at Elephant's Back has been completed and a water supply provided for the motorists, which proves a very great benefit during the hot summer days.
>
> About 3,800 feet of the new Garfield Peak Trail have been completed. The new trail will be approximately 8,000 feet in length. It will afford easy access for both foot and horse passengers to the top of this most interesting peak, where splendid views of the lake and surrounding country may be had. It no doubt will rival the new Crater Wall Trail to the lake in popularity with the visitor. The trail is being constructed on high standards with a minimum width of 4 feet and maximum grade of 15 per cent.
>
> The new trail to Victor Rock and the new Sinnott Memorial have been completed with the exception of the surfacing.
>
> About 9 miles of bridle paths have been completed leading from the rim to Anna Spring, with return trails, making a very interesting horseback trip.
>
> Guard rails at the Anna Spring checking station and on one approach to Goodbye Bridge were constructed. Oil processing of the section of road crossing Goodbye Bridge was completed.

Other construction projects at Crater Lake during 1930 included the completion of a two-story stone and frame employee's cottage at park headquarters, a combination bathhouse and comfort station at the rim, and a north entrance ranger station. The design of the latter building had been changed from log to stone for climatic and landscape considerations.

Meanwhile Merel S. Sager, who had received a master's degree in landscape architecture from Harvard University, had been assigned to Crater Lake by the NPS field landscape engineering headquarters office to supervise architectural, landscape, and planning projects. Among the park development projects he advised on in 1930 were the Sinnott Memorial (discussed in the chapter on interpretation), roadside cleanup operations, location surveys for the proposed new Rim Road, and landscaping and revegetation of the rim area. Plans were laid to plant a sample plot at the head of Crater Wall Trail in order to determine the costs, feasibility, and best methods to be used in restoring vegetation on the dry pumice area of the rim.[22]

Construction and development projects at Crater Lake received a considerable boost in the early 1930s as a result of government emergency public works programs designed to counter the effects of the worsening Depression. Increasing funds were made available for park purposes to help alleviate the unemployment crisis. The 1931 construction season was the first at Crater Lake to be affected by such appropriations, a total of $546,750 being allotted for park development projects. Superintendent Solinsky described the construction season's operations:

> . . . In our endeavor to assist the unemployment situation in this locality our forces were increased from 30 to 40 per cent over our normal requirements. This increase in force taxed our accommodations and facilities to the limit and the overburden in a measure increased the construction costs. Additional bunkhouse and messhall accommodations were necessary, additional transportation facilities were needed to take the crews to and from the work, additional hand tools and equipment were needed and the employment of hand labor, wherever possible rather than the use of labor saving machinery and equipment,

all tended to increase the construction cost over what would have been the case under normal conditions.

The emergency funds permitted the park to undertake extensive improvements to its utility systems. A new electrical power system was installed to serve the Government Camp and rim areas, a water storage system was constructed near Garfield Peak to service the rim area, and a water supply system was built for the Lost Creek Ranger Station and public campground.

The allotted funds also enabled the park to perform various minor roads and trails construction projects. Some thirty men were employed to clean up both sides of the highway between Government Camp and the west park entrance, removing and burning trash, logs, dead snags, and debris. Rim Village landscaping and revegetation continued with primary emphasis being placed on the area at the head of Crater Wall Trail where shrubs, evergreens, and sod were planted. The Garfield Peak Trail was completed and quickly became one of the most popular trails in the park. A new parking area was constructed near the lodge and cafeteria to provide ample parking space for visitors. Some 66 miles of telephone line were reconstructed and relocated to remove all lines in sight of park roads, and all overhead wires in the rim area, Government Camp, and Annie Spring were replaced by underground cable. A new rustic fire lookout station was partially completed on Watchman Peak, and a storeroom and garage were added to the Government Camp utility area to house the park's fire fighting equipment. Some thirty miles of fire lane motorways were constructed to aid in fire control and suppression operations. Initial grading and layout of three major road projects were begun, including grading on the first six-mile unit of the new Rim Road from the rim area to the North Entrance Ranger Station and a road from Lost Creek to Kerr Notch.[23]

Extensive construction and development activity continued at Crater Lake during 1932. An extensive program was undertaken at Government

Camp to provide for more ample employee housing and aid park operations. The structures erected included two employees' residences for the park superintendent and park naturalist, a ranger dormitory, combination machine shop/utility shed/oil house, and comfort station. These buildings shared a number of design elements that contributed to their unobtrusive, environmentally-sensitive rustic appearance, including the use of stone masonry, steeply-pitched roofs pierced by dormers and masonry chimneys, and multi-paned sash windows. The building projects, which were carried out under the guidance of the aforementioned Sager, has been called "one of the most comprehensive rustic architecture programs ever undertaken by the National Park Service."

This rustic architecture program at Crater Lake has received considerable attention from National Park Service historians and architects. The principal study of such architecture in the parks was prepared in February 1977 by William C. Tweed, Laura E. Soulliere, and Henry G. Law. The authors of the study made the following observations about Crater Lake:

> Despite the large number of structures under construction, Sager attempted to achieve high rustic quality in each and every structure. Responding to local geological and meteorological conditions, he chose as a central architectural theme for the government headquarters area, the use of massive stone masonry and steeply pitched shingle roofs.
>
> The superintendent's residence, the naturalist's residence, and the ranger's dorm, all built during the summer of 1932, shared these features. In each structure Sager continued his experiments with the use of wall stones of unprecedented size. He had first attempted this type of work at Crater Lake in the construction of the Sinnott Memorial museum in 1930-1931. Some of the stones incorporated into the government headquarters buildings were as large as 15 cubic feet in volume. . . .
>
> When completed, the stone buildings with their steeply pitched green shingle roofs had an undeniable air of solidity about them. Some of the irregularly shaped stones near the bottoms of the walls were up to five feet across, and even the smaller stones placed near the top of walls were often two or three feet in diameter. The relationship of the walls to the underlying geology was obvious. The sharply pitched green shingle roofs

> bore clear resemblance to the pointed spires of the conifer snow-forest of Crater Lake. The buildings were practical, too. The steep roofs shed snow easily. The second story dormer windows were high enough to stay above the deep snowdrifts of winter, and the stone walls provided excellent insulation against low winter temperatures.
>
> The oil house and machine shop buildings shared design features with the three residential structures just described. The Watchman Lookout, however, was a more complex project. Located atop one of the highest points on the lake's rim, the lookout was to be both a trailside museum and a fire lookout. The resulting structure admirably filled both purposes. The flat roofed first floor, built of massive stones, housed the museum room, rest rooms and a storage area. The second story, which rested on only a portion of the irregularly shaped first floor, was a four-sided, glass enclosed observation room. Both the roof of the observation room and the catwalk running around it were made of logs. The effect was striking. The lookout seemed to be a part of Watchman peak.[24]

Roads and trails also received attention during 1932. New trails were constructed from the Rim Road to the Watchman Lookout Station and from the rim area to Discovery Point. The Watchman Trail was approximately one-half mile in length, five feet wide, and constructed on a grade of fifteen percent. The Discovery Point Trail was approximately 1.5 miles in length, five feet wide, and had no grades exceeding twelve percent. Both trails were oiled.

Various improvements were made to the Rim Village area. Stone parapet walls were completed, new sidewalks were laid, and the revegetation program was continued. Log railing was replaced by stone curbing, the log rail being used to replace the former small guard railing along the south entrance road and at the large turn between Annie Spring and Government Camp.

Road construction under the administration of the Bureau of Public Roads continued to be the focus of considerable activity in the park during 1932. Both the Lost Creek-Kerr Notch and Diamond Lake Junction to north park boundary roads, as well as the road from the rim to the north park entrance were completed by the fall. Sections of the Rim Road were surfaced.

Several construction projects were undertaken to expand and improve the forest protection and fire prevention programs of the park. A water supply system was provided for the Watchman Lookout Station. In addition some 25 miles of fire lane motorways were completed in the northwest and southwest sections of the park.[25]

By 1933 the effects of the Depression had made a significant impact on park operations and development. Regular appropriations for the park were reduced by some 15 percent, resulting in a decrease of temporary per diem employees who comprised the majority of the summer construction crews. The reduction in regular park appropriations also meant less funds were available for construction and development. The steady decline in regular park appropriations continued throughout much of the 1930s, averaging between 45 and 60 percent of pre-Depression levels. Not until 1938 did regular park appropriations return to levels approaching those of the pre-Depression years.

To fill the shortfall in regular funding for the construction and development programs at Crater Lake and other national parks, public works programs were established by the administration of President Franklin D. Roosevelt. The New Deal public works employment and funding agencies, in particular the Emergency Conservation Work (ECW) and Public Works Administration (PWA), provided a large infusion of men and funds to the park to enable management to complete a significant portion of the construction and development plans that had been approved in the late 1920s. Thus, the funds and manpower supplied by the New Deal agencies became an integral part of the park construction and development program. Without this impetus the ongoing work of developing Crater Lake according to its master plan would have come to a standstill during the 1930s.

Under the ECW program two Civilian Conservation Corps (CCC) camps were established in Crater Lake National Park during June 1933. Camp No. 1 was set up temporarily in the "plaza" at Government Camp on June 12, and within two weeks the men were available for work. By that time there were 206 men at the camp, and of this total 172 were assigned to field work, 28 to camp duty, and 6 to clerical work. On July 1 and 2 the men were moved to new quarters "located on the opposite side of the road." At first the men were housed in tents, but work soon began on frame buildings, consisting of a messhall, toilet, showers, and cold storage. Officers for the camp were housed in the new ranger dormitory.

It was originally determined to locate Camp No. 2 at the Wineglass on the Rim Road across the lake from the lodge. Heavy spring snows, however, made this objective impossible. The camp was thus located at Lost Creek, but the original name was retained to facilitate clerical work in Washington. After establishing a temporary camp on June 12, the men were moved to a permanent camp on July 5.

The men of both camps engaged in various construction, development, and maintenance projects from June 12 to September 30, 1933. The activities of the men in Camp No. 1 were concentrated on four principal projects: camp construction, insect control, landscaping, and roadside cleanup. Some 15,950 acres of forest were treated for insects. Landscaping was performed along the rim from the Information Building to the lodge as well as around the ranger dormitory, superintendent's residence, naturalist's residence, and three employee residences at Government Camp. The landscaping included the planting of sod, shrubs, and bushes, using peat hauled from a bog in Munson Valley and top soil taken from a dump hillside area along the east entrance road. The rim landscaping brought to completion the three-year-long objective "of bringing back vegetation between the road and the rim all the way from the head of the trail to Crater Lake Lodge." Eight miles of roadside were cleaned up, while two miles were partially cleaned.

Camp No. 1 enrollees also participated in other projects during 1933. These included:

Reconstruction and repair of eight miles of telephone line that had been downed by snow and wind falls

Planting of 120,000 fish in Crater Lake

Assistance in surveying 25 miles of roads and trails and sectionizing over an area of 70 square miles

Construction of three log patrol "snowshoe cabins" at Bear Creek, National Creek, and Maklak Spring to provide shelter for winter patrols and hunting season administration

Construction of twelve miles of new truck trails, formerly known as motorways, and maintenance of 82 miles of old truck trails for fire protection

Marking of 72 miles of park boundary for the information of park employees and hunters

Construction of a frame horse barn in the rear and to the south of the utility group at Government Camp (approximately on the site of the old horse corral).

Manpower for fire fighting

Twenty acres of public campground cleanup

The men of Camp No. 2 engaged in activities similar to those of Camp No. 1 during 1933. The principal projects of Camp No. 2 were roadside cleanup, insect control, and truck trail and horse trail construction. Some 4.6 miles of roadside were cleaned, and insect control

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work was conducted on 14,810 acres. Nineteen miles of truck trails were constructed at Sun Creek, Crater Peak, and Wineglass, and a 2-1/8-mile, 4-foot standard horse trail was built to the summit of Mount Scott.

Camp No. 2 enrollees also completed other projects in the park. These included rebuilding and repairing 4-3/4 miles of telephone line, construction of a one-mile fire break, and cleanup and burning of two acres of timber that had been downed by a windstorm on the Wineglass Tract several years earlier. Work at the Lost Creek Campground consisted of construction of a frame horse barn, cleanup of fifteen acres, and repair of one mile of water line.[26]

During the late summer of 1933 Public Works Administration funds totaling $701,350 became available for minor roads and trails projects and other physical improvements at Crater Lake. Much of the work carried out with PWA funding was performed by CCC personnel. An effort was made to push this work "so that a reasonably good showing could still be made for the construction season." Some 1,200 feet of stone curbing was completed between the road junction and the lodge, and a bituminous sidewalk was constructed across the planting area near the lodge. Service roads were graded and partially completed between the plaza and the residential area and the plaza and the utility area at Government Camp. Two trails to Union and Crater peaks were partially finished as was a new road through the Rim Campground and a new parking area in front of the lodge. Four wood frame employees' cabins and a comfort station in the Sleepy Hollow area near park headquarters were nearly finished. These simple and inexpensive cabins were the first of a group of such structures to be built for housing park seasonals. Sewer and water system extensions at Government Camp were completed, the latter consisting of a concrete tank being built up the stream behind the superintendent's residence. A new water supply system was completed for the rim area with faucets being placed at convenient intervals along the walls in the planted area.

PWA funds also enabled the Bureau of Public Roads to let a number of contracts for major road construction in the park during 1933. Among these projects were Rim Road grading, surfacing and oiling of the east entrance road, and surfacing and guard railing along the Rim Road and Diamond Lake Road.[27]

Two CCC camps were again established at Crater Lake in 1934, Camp No. 1 moving to a new location near the Annie Spring Checking Station and Camp No. 2 using the same site at Lost Creek as the year before.[28] In order to relieve Acting Park Superintendent David H. Canfield of administrative details, ECW park engineer George F. Whitworth was appointed as general supervisor of all ECW activities at Crater Lake and Oregon Caves and Lava Beds national monuments. Some 185 enrollees were attached to Camp No. 1, while Camp No. 2 had 150 men. Relatively mild weather conditions permitted both camps to work from mid-April through mid-October.[29]

One of the major CCC projects during 1934 was the continuation of the park landscaping program. In October it was estimated that it would have taken regular park appropriations five years to accomplish an equivalent amount of landscaping work to that performed by the CCC in 1933-34. Using peat from Munson Valley and topsoil, plants, shrubs, and trees from various parts of the park, landscaping projects were conducted at the rim, Government Camp, and campgrounds. Completed, or nearly completed, was landscape work in front of the lodge and around the cafeteria building at the rim. At the Rim Campground 25 individual campground units were laid out, each having a combination stove, fireplace, tent site, table site, and sufficient parking area for an automobile. As a means of creating some privacy and at the same time restoring an area that had been heavily trampled, numerous plants and shrubs and a ground-cover of rush were placed throughout the area. At Government Camp the log administration building was demolished and the area landscaped. Landscaping activities were also carried out around the ranger dormitory, Government Camp entrance, concessionaire's gasoline station, and various residences.

During 1934 CCC crews obliterated some six miles of old road sections that were adjacent to and visible from the main park highways. Most of this work was carried out on the south and west entrance roads, the road between Government Camp and Annie Spring, and the section of Rim Road from Lost Creek to the Bend Highway Junction. Several hundred trees were planted within the abandoned road beds.

Other CCC projects during 1934 included construction of three wood sheds in the utility area at Government Camp and two latrines each at the Whitehorse and Cold Springs campgrounds. Fire control truck trails or motorways were completed to Timber Cone Crater, Bear Creek, and Union Peak and from Castle Creek to the Watchman. Horse corrals were completed at Bear Creek, Government Camp, and Maklak Springs. Work was started on the 1.5-mile Vidae Falls Trail, and bank sloping and erosion control projects were conducted along the west and south entrance roads and the road from Government Camp to Rim Road.[30]

The Public Works Administration provided funds for considerable work at Crater Lake in 1934, some of the projects being carried out by CCC labor. Among the major projects that were placed under contract were those for surveying, grading, and surfacing sections and building masonry guardrails along portions of the new Rim Road. The roads at Government Camp were graveled, and cutstone curbing was placed around all driveways in that area as well as around the lodge and part of the distance from the lodge to the cafeteria. A new trail was built to the top of Wizard Island, the location being almost entirely through the wooded area on the south side of the island.

PWA funds were used to construct several buildings at Government Camp designed to increase the efficiency of park management and operations. By early October a new rustic architecture Administration Building was 80 percent completed. The structure, like the other buildings at Government Camp, featured massive boulder masonry, stained timbers, a steep pitched roof, and dormer windows. Extensive additions were made to the messhall and warehouse. A double vehicle garage and several storage sheds were constructed in the utility area for the expanding fleet of park maintenance trucks.[31]

Two CCC camps were again established in the park during 1935. As in previous years the work of the enrollees was concentrated on trail construction and maintenance, completion of the park road system, landscaping of the Government Camp and rim areas and Rim Campground, and road bank sloping. The most important building construction project funded by PWA appropriations was completion of the new Administration Building.

Nearly $500,000 in PWA allotments, provided under the Emergency Construction Act of June 19, 1934, enabled the park to complete much of its planned roadwork in 1935. In July Superintendent Canfield observed that the fire control motorway system for the park had been completed. In addition work had progressed under the Bureau of Public Roads to the point that some 18 miles of the new Rim Road were ready for oiling. He observed further:

> Three more units were in varying stages of construction, bringing three-quarters of the rim circuit in the process of road building. This leaves only the highway from the East Entrance Highway to the Annie Spring-Rim Highway untouched except for survey work. Covering this stretch there has been a great deal of debate as to whether the so-called high line or the low line is the proper route. Sides and opinions on this subject have varied from year to year, being almost settled several times, but now apparently has been reopened. Survey work has also been done on the two entrance highways from south and west with a view toward reconstruction which is necessary in view of increased winter usage and contemplated snow removal operations.[32]

During the summer of 1936 only one CCC camp was established at Crater Lake. This was Camp No. 1 at Annie Spring, the enrollees having spent the winter at Oregon Caves National Monument. On May 21 a detachment of enrollees arrived at the park to assist in snow removal and "other smaller preparatory projects." The full detail of enrollees did not

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arrive from Oregon Caves until June 22. The camp consisted of 137 men with a spike camp from Lava Beds National Monument supplying an additional 30 enrollees. Of the 137 men, 125 were junior enrollees and 12 were local experienced men.

One of the principal projects of the CCC enrollees in 1936 was the continuation of landscape work in the rim and park headquarters areas. Work was virtually completed in the Rim Campground with construction of fifteen additional log tables and benches and twenty more fireplaces, planting of shrubs and trees, and placement of logs and boulders for individual camping units. Expansion of the campground was undertaken with five fireplaces and log tables being built in the area below the existing campground. Further landscaping work was performed around the lodge, Community House, Information Building, north and south sides of the rim area, cafeteria, and island at the Rim Road junction. The tank house at the rim was razed and the area landscaped, and a new tile water line was laid near the pumping plant. By the summer of 1936 Superintendent Canfield was pleased to report that the rim area landscaping had "transformed a former dusty and unattractive area into a scene of native beauty."

Landscape work at park headquarters consisted of planting and laying of walkways and the new Administration Building, ranger dormitory, warehouse, messhall, parking area, and various park residences. A stone base flag pole was completed at the east end of the Administration Building, and a rustic log directional sign was erected at park headquarters.

Other CCC projects during 1936 included construction of a rustic log foot bridge between the ranger dormitory and the messhall and placement of entrance motifs at the park's west and south entrances. The exteriors of three temporary employees' cottages were completed. Fireplaces and log tables for individual camping sites at the Cold Spring and Annie Spring campgrounds were built. Portions of abandoned roads were obliterated and replanted.[33]

Funds appropriated by various New Deal agencies enabled the park to carry out new construction projects in 1936. The heating system, flooring, and other interior finishing touches in the ranger dormitory were completed. The structure had been commenced in 1932 but left unfinished because of the exhaustion of funds. Roadwork under the supervision of the Bureau of Public Roads, however, continued to be the principal public works project in the park. Superintendent Canfield provided a brief overview of the various road projects in his annual report for 1936:

> With the new Rim Road in varying stages of construction and completion over a length of 25 miles, bids were being sought at the end of the year for the next unit leading from Kerr Notch to a point near Sun Notch, 2.723 miles. The discussion of several years as to location of the road from Kerr Notch to Park Headquarters was decided. The new road from Kerr Notch to Sun Notch will be at a higher level than the old road, but from that point will follow approximately the old road to Park Headquarters. The new route opens interesting new scenery to the traveling public.
>
> Placing of crushed rock on the 13 mile unit from the North Entrance Ranger Station to Cloudcap was begun, and work was continued on two units from Cloudcap to Kerr Notch. Hard-surfacing of the Rim Road from the Lodge to the North Boundary was completed, including the paving of the entire Rim Area used by motor travel and the large parking area in front of the cafeteria, eliminating dust conditions which had been prevalent for many years.
>
> The hard surfacing of the Rim Road to the North Entrance Checking Station, completes the first unit of the rim route with the exception of minor finishing work. The hard surfacing of the road from the checking station to the north boundary makes fast motor transportation to Diamond Lake and The Dalles-California Highway possible. Much favorable comment has been heard from the motoring public on these particular roads.

The year 1937 again saw the establishment of two CCC camps in the park at Annie Spring and Lost Creek. Between June 15 and October 15 the enrollees engaged in landscaping, road bank sloping, cleanup, motorway maintenance, fire fighting, fish planting, residence construction, improvements to building interiors, wood cutting, obliteration of old roads, and snow removal from roads, trails, and buildings. Among the principal CCC projects were:

(1) Conversion of unused portion of messhall into four rooms for female help, toilet, and reading room

(2) Construction of three employees' cottages, bringing total number of houses in employees' cabin area to ten

(3) Construction of 40-car parking area near utility area at park headquarters

(4) Landscaping at park headquarters and in rim area, including planting of 2,200 shrubs, plants, and trees at the former and 850 at the latter

(5) Obliteration of abandoned roads at park headquarters and some six miles of old Rim Road

(6) Signs and markers for buildings at park headquarters

(7) Construction of comfort station in rim area

(8) Construction of 30 individual camping sites and 20 fireplaces at Rim Campground

(9) Placement of 50 table and bench combinations in rim area

(10) Construction of 20 heavy log seats along Garfield and Lake trails

(11) Erection of small blacksmith shop at Annie Spring

(12) Construction of twenty table and seat combinations at Annie Spring Campground

(13) Construction of fifteen log table and bench combinations in Lost Creek Campground

(14) Construction of ten log table and fireplace combinations, cleanup, and layout of pathways in Cold Spring Campground

(15) Bank sloping of eight miles of roadway from the park's west boundary to Annie Spring

(16) Obliteration and replanting of several dangerous parking overlook areas between park headquarters and the rim

(17) Erection of fences at the entrances of all park motorways to prohibit tourist travel

(18) Construction of fire protection truck trail from Union Peak Spur to Annie Spring

(19) Treatment of 1,200 acres of forest in vicinity of Cloudcap for blister rust disease

(20) Construction of two heavy stone motifs at the north and east entrances

A CCC "side camp" was maintained in the park during the winter of 1937-38, the enrollees engaging in snow removal from trails, roads, and buildings, interior building maintenance, and general assistance in park work.

During 1937 considerable work was conducted on the Rim Road construction project with PWA funding under the direction of the Bureau of Public Roads. In his annual report for 1937 Superintendent Canfield described the road construction projects then underway:

> Two contracts for the grading of 4.9 miles of new Rim Road were underway at the end of the year. These two units extend from Kerr Notch over the higher slopes of Dutton Ridge through Sun Notch to a point near Vidae Falls. This mileage covers a new high line route six to seven hundred feet higher than an old road in use for the past 17 years. The higher elevation opens up scenic areas of the park hitherto inaccessible and provides motorists with much wider panoramas of park and adjoining forest lands. An idea of the difficulty of the project is a rock cut 145 feet from the road gutter to the crest of the bank. Over 70% of the first two mile unit is composed of rock work and is not expected to be completed until the autumn of 1938.
>
> A 12.3 mile unit of the Rim Road from the North Entrance to Cloudcap was rock surfaced during the year and was ready for oil treatment at the end of the year. Two units totaling 3.9 miles from Cloudcap to Kerr Notch were graded and at the end of the period were ready for rock surfacing. Invitations to bid on this job were advertised in June. A contract was to be awarded in July of the new fiscal year. With the present work underway and completed, only a unit of 3.3 miles remained at the end of the year untouched. It leads from Vidae Falls to Park Headquarters. Plans were carried forward to have this unit under contract before the end of the 1937 summer season. It is expected to have the entire rim road completed during the summer of 1939.[35]

In his annual report for 1938 Superintendent Leavitt discussed the beneficial aspects of the public works projects to park development. In particular, he singled out the contributions of the CCC, stating that much "of the work accomplished by CCC labor could otherwise not have been accomplished, or at least not for several years." Of special interest to Leavitt were the cottages that had been built in the Sleepy Hollow employees' cabin area. The cabins, according to Leavitt, eliminated "the use of tents and make it possible for employees to move their families in earlier in the spring than was previously possible when dependent on tents for housing."[36]

The two CCC camps were again established at Annie Spring and Lost Creek during the summer season of 1938 and operated from July 1 to October 15. Throughout the winter of 1938-39 a "spike" camp was maintained in the park. The second floor of the Machine Shop was altered to provide accommodations for the "spike" camp. Among the activities of the enrollees were landscaping, fire motorway, trail, and campground maintenance, fire fighting, fish planting, house construction, interior building improvements, area cleanup, snow removal from trails and buildings, and woodcutting. Included in the landscaping activities of the enrollees were campground improvements, old road obliteration, installation of fifty directional signs, planting around buildings and along roads, and layout of twelve off-road parking areas with landscape treatment.

PWA funded road construction under the direction of the Bureau of Public Roads continued to be a major facet of park development operations in 1938. Grading of the 4.9-mile section of Rim Road between Kerr Notch and Vidae Falls was nearing completion, and the 3.3-mile section between Vidae Falls and park headquarters was completed. Bituminous paving (plant mix type of oil surfacing) was completed on 12.3 miles of Rim Road between the north entrance checking station and Cloudcap.

PWA funds enabled the park to extend and modernize its utility systems during 1938. These projects, which continued into 1939, included the extension of an overhead electric transmission line from park headquarters to Annie Spring and the extension and improvement of the park's water, sewage, telephone, and electrical systems. The telephone line between park headquarters and the rim area was placed underground, and the overhead power line in the cabin area replaced by an underground line.[37]

One CCC camp was located in the park at Annie Spring from July 1 to October 15, 1939. The camp was converted from tent construction to portable, wooden barracks buildings with a new utility area. During the summer a "spike camp" was stationed at Oregon Caves National Monument to operate a sawmill for the various proposed structures at Crater Lake, Oregon Caves, and Lava Beds.

The CCC projects at Crater Lake during 1939 were many and varied. A workshop was again located at the park for the construction of signs, and a crew of fifteen enrollees assembled, carved, and erected some 80 rustic signs to replace the former metal signs. The Rim Campground was improved with new plants and trees and development of new parking and camping sites. The interior of the fire hall at park headquarters was improved, and three employees' residences constructed in 1931 were remodeled with new dormer windows, stone porches on the exteriors, downstairs walls and ceilings, bathroom fixtures, and knotty pine in the living rooms. Two footbridges were constructed at park headquarters, one leading to the Lady of the Woods and the other between the Administration Building and the employees' cottages. Three additional employees' cottages were partially completed. A new powder house was constructed at park headquarters, and planting, stone steps, and walkways were laid out to the rear of the Administration Building and around several park residences.

Major road construction projects were completed in the park during 1939. These projects included the grading of the Rim Road sections between Vidae Falls and park headquarters and Kerr Notch and Dutton Ridge. A fill in the Vidae Creek area was landscaped and planted with some 5,000 willows, twin berry, huckleberry, spirea, and other plants. The Sun Creek Campground Road was laid out connecting with Rim Road in the vicinity of Vidae Falls. With the completion of these projects Francis G. Lange, Resident Landscape Architect, reported in October:

> Major road activity on the Rim Road is nearing completion. Grading operations are completed. The Rim drive starts at Park Headquarters and ends at the same point, a distance of thirty-two miles. The actual amount of new construction on the Rim Road takes place at the Rim and ends at Park Headquarters, a distance of 29 miles. Rim Road construction started in 1930 and it appears that final oiling will be completed by 1940 or 1941.
>
> During construction activity from 1934 to 1939 six landscape architects have been employed. Their work has consisted of special landscape features, such as parking areas, planting, old road obliteration and other landscape details.

During 1939 the Bureau of Public Roads made location surveys throughout the park, particularly between the rim and Annie Spring and immediately west and south of Annie Spring. The surveys were for the improvement of those early park roads which had become substandard for the heavy load of year-round travel they were carrying.[38]

One CCC camp operated at Annie Spring during the summers of 1940 and 1941. The number of enrollees was greatly reduced from that of earlier years, however, and the amount of work accomplished thus declined. The activities of the enrollees continued to include landscaping, motorway maintenance, fire fighting, fish planting, cottage construction, cleanup, snow removal, and woodcutting. During the summer of 1940, for instance, enrollees razed several old buildings, constructed a new public comfort station at park headquarters and a "portable" ranger station for the east entrance, began work on a two-story frame hospital building, and performed fire hazard reduction work on the recently-acquired Yawkey Tract. In 1941 CCC personnel conducted engineering surveys for water and sewer systems, fire protection projects, and new campground proposals, continued work on the hospital, and constructed a portable ranger station at the north entrance to the park.

When the 1941 summer season at Crater Lake was over, the Annie Spring CCC camp moved to Oregon Caves National Monument. On November 23, 1941, the camp was disbanded abruptly, thus ending CCC activity at Crater Lake and surrounding areas.

The 1940 summer season witnessed the completion of the PWA-funded projects to expand and modernize the park utility systems. The overhead electric transmission line to Annie Spring and the water, sewer, telephone, and electrical systems at park headquarters and the rim area were all completed.

The Bureau of Public Roads continued to oversee major road construction projects in the park during 1940-41. Both summers witnessed operations in quarrying and crushing rock in the park for material to metal base and surface twelve miles of Rim Road from park headquarters to Kerr Notch. The five-mile stretch of road from Goodbye Bridge to the rim was seal-coated with bituminous surfacing in 1941. In September of that year Goodbye Bridge was closed to traffic for safety reasons, a steep unpaved detour road and temporary detour bridge serving in its place. The log bridge across Annie Creek was reinforced in 1941 to enable it to withstand the strain of heavy traffic. During the winter of 1941-42, however, both bridges collapsed.[39]

Throughout the war years construction and development projects at Crater Lake were reduced drastically as a result of budget cutbacks, loss of personnel to the military and war industry, and termination of the CCC and other New Deal public works programs. The park was closed for the winter in November 1942, and for the remainder of the war park operations were confined to the summer months with minimum staff and equipment "on a purely protection and maintenance basis." Thus, construction and development were largely eliminated from the park program during the war.[40]

Some small construction projects, however, were carried out in the park during the war years. In 1943, for instance, a new boathouse for protection of the government-owned launch was constructed "at a new and more practical location on Wizard Island." An extension to the power transformer house at park headquarters was built to provide room for a stand-by gasoline-driven electric power generator, and the power plant and generator were installed. The new hospital building was nearly completed, and 24 bank protectors were installed on Rim Road.[41]

Despite the curtailment of construction and development projects in the park during the war, regional technicians and park personnel initiated various planning studies for future development work during the postwar era. These studies included:

(1) New road locations from the south and west entrances to the rim

(2) New winter sports areas, including the Watchman, Hillman Peak, and Dutton Ridge areas

(3) Tunnel project through the rim of the crater to the lake shore

(4) New campgrounds at the Watchman, Munson Creek, and Sun Valley areas

(5) New headquarters development, covering the existing location and possible removal to the south entrance area

(6) Location of district ranger stations at the south, west, north, and east entrances

(7) Improved or additional facilities of the park operator whether in the rim area or elsewhere[42]

In January 1943 a "Report on Study for Future Headquarters Developments at Crater Lake National Park" was prepared by E.A. Davidson, Regional Chief of Planning, and R.D. Waterhouse, Regional Engineer. The study considered the question as to whether it was wiser to make rather extensive structural and layout improvements at the existing park headquarters or to construct these needed facilities at a more suitable location. Related to this question was the wisdom of removing administrative activities to any new headquarters site. As described in the report, the problem facing park management was:

> When a site was selected for Park Headquarters, Crater was a summer-season operation. For some 8 or 10 years past (assuming the present War emergency to be temporary) the winter activity and use of the park has grown, and will probably continue to grow. Buildings, facilities, and circulation roadways were not designed for winter operation under an average winter snowfall of forty to fifty feet, or for snow clearance by mechanical means during winter. This winter-use places an unanticipated strain on structures even above the normal strains under such snowfall, until several structures of the utility area are described as "about to fall" and "beyond repair." Water lines, not designed for winter, cause heavy maintenance. The job of mechanical snow removal is huge. . . It has been found desirable to keep a gradually increasing number of men in the park for winter operation, and also to provide some facilities for winter visitors. As a consequence, the lack of good winter buildings has become acute, and the job of snow clearance almost impossible. With increased summer use, a shortage of both utility and residential buildings has developed.

Accordingly, Davidson and Waterhouse observed that it had been proposed to construct six utility and residential structures at park headquarters. These buildings included: Utilities--Machine Shop and Utility Building, Snow Equipment Shed, Cold Storage Plant; Residential--Assistant Superintendent's Residence, Chief Clerk's Residence, Apartment House (approximately 8 units). In line with previous master planning for the park, it had been decided that before investing funds of that magnitude the utility area must be redesigned to provide winter operations with less mechanical difficulty and physical hazard, eliminating most or all of the existing utility buildings which were approaching the limits of their usefulness.

Davidson and Waterhouse submitted three alternatives concerning the headquarters site issue. One plan proposed removing the utility area to the nearby "baseball field at the lower end of the existing headquarters utility area and converting the existing utility area space to residential uses. A second plan proposed keeping the utility area where it was, razing all buildings except the bunk and messhall and warehouse and constructing larger structures better suited for winter oprations. The "baseball field" would be used for winterized residential structures. This residential area would be tied to the existing area of 8 cottages and 12 two-room cabins which was to be replaced by more modern residences. A third alternative proposed removal of the utility area and park administrative headquarters to the south entrance of the park. This new development area would include a road maintenance yard, utility area, twenty-two residential units, an administration building, a club or assembly house, and a bunk-and-mess building. After assessing the merits of the three plans, the authors concluded:

> it seems clear that park policies of conservation, efficiency of year-round operation, ultimate economy of cost and maintenance, and employee living conditions and morale will all be benefited by a removal of most administrative and headquarters operations to the proposed new south entrance location.[43]

Following their report on the headquarters question, Davidson and Waterhouse prepared two other studies relating to future park development and planning. In May 1943 they prepared a "Report on Studies for Rim Area Campground Relocation," and on August 6 Waterhouse submitted a follow-up memorandum to the Region IV Director regarding the possibility of constructing a tunnel to the lake shore. The thrust of the two reports consisted of recommendations to remove campground facilities from the existing Rim Village area to a site just below Rim Road some 1½ miles northwest in the vicinity of Discovery Point. The Munson and Sun Valley vicinities were considered but rejected in favor of the Discovery Point area. From the new campground location a tunnel could be built, according to the authors, to provide easy access to the lake. The reports left open the question as to whether the park operator's concessions should be moved to a location near the proposed campground or to the water's edge near the lower end of the tunnel. The reports contained proposals for a new trail to the lake and mechanical lifts to transport visitors to the lake shore.[44]

The years 1943-45 witnessed considerable debate and discussion in the Washington and Region Four office regarding the planning issues facing Crater Lake National Park. As a result of such discussions, several decisions were rendered during this period by NPS Director Newton B. Drury and Regional Director O.A. Tomlinson. The decisions were made, however, with the understanding that park problems were "normally fluid and should remain so, usually, until final action is necessary." Responding to the question of whether a trail, elevator, or tunnel should be built to provide easy access to the shores of Crater Lake, Drury stated on January 13, 1944:

> Long established policy which limits physical development of park areas to a minimum necessary for protecting park values and for reasonable access, and reasonable safety and comfort of visitors, definitely rules out the tunnel proposal. Likewise, since the existing trail from the rim to the lake affords accessibility, is reasonably safe, and is as easy to negotiate as are average mountain trails, there seems no need for consideration of a trail relocation such as has been proposed from time to time, or for trail improvements which involve additional construction nearby. This reasoning also rules out consideration of mechanical lifts or similar surface contrivances for reaching the shores without physical effort.

Nearly two weeks later, on January 26, 1944, Drury addressed the twin issues of whether the park should be operated on a seasonal or year-round basis and whether park headquarters should remain at its existing site or be relocated to the south entrance. In regard to these issues he concluded:

> that the conservation of the park and its use, as contemplated when it was established, will be accomplished if winter use of the area is not promoted by snow removal or other means as was the case before the war. It is contemplated that winter operations in the park shall continue as at present after the war. . . it will be desirable to continue the park headquarters at the Government Camp location, and make only such

> improvements or changes in the buildings as may be necessary for summer operations. . . .

On February 1, 1944, Drury addressed the issue of whether the Rim Campground should be retained and expanded or abandoned and relocated. He indicated his agreement with the studies that had recommended its abandonment.

Later on September 16 the director responded to recommendations that the existing road between park headquarters and the rim be improved and relocated. For the present the road was to remain in its existing alignment "with such widening and resurfacing as is necessary to provide for satisfactory summer travel."

Other issues facing the park related to development of concessioner facilities and the need for a visitor center/museum building. These questions were addressed in January 1945 by Tomlinson. As to whether the lodge should be permitted to remain at its existing site or be moved farther back from the rim, he observed:

> It is very much doubted that the Service would require the operator to move the present building. Rather a relocation, if such were desirable, would occur only in the future when and if a new lodge is erected. The question should not and cannot be answered at this time although consideration is desirable.

He stated further that cabin development would be determined on the basis of postwar visitor needs and use. The location of a more suitable utility area for the concessioner and a gasoline station in the rim area required further study. A park visitor center/museum building on the rim was a high priority item for new construction.[45]

During the remainder of 1945 further discussions ensued concerning the status of these issues, particularly in view of the decision that Crater Lake would be operated as an all-year park. Accordingly, Drury reversed earlier policy statements by issuing directives in late 1945 and early 1946 that new all-year park headquarters be established "just within the boundary of the south entrance to the Park." The existing park headquarters and utility area had been constructed for summer operation only and was not laid out for economical and efficient operation during the winter months, nor were any of the buildings constructed for year-round use. This area would "become the principal urban area within the Park, serving for its all-year operation, with the thought that other developed areas will be kept to a minimum, and will lead to the closing of most of the utility areas in Medford and the ultimate sale of those properties." Accordingly, he initiated discussions with the U.S. Forest Service to acquire a tract of land from the Rogue River National Forest on which to build the new headquarters. At the same time Drury indicated his support for the reduction and ultimate elimination of camping in the rim area and enlarging camping facilities at Annie Spring. He also endorsed reconstruction and realignment of the road between park headquarters and the rim area and in the vicinity of Annie Spring.[46]

No new construction was initiated in the park for several years after the war. The lack of construction activity, according to Superintendent Leavitt, was the result of an "economy-minded Congress" whose primary purpose was "to reduce and close out war-born expansion or new bureaus and provide for an effective national defense during the Cold War." Thus, continuing low appropriations worked hardship on the park's budget which had "reached an all-time low during the war and now must expand to give proper protection" for accommodation of the "tremendous increase in travel."[47]

Despite the lack of funds with which to commence a major park construction program during the postwar years, available funding permitted minor construction projects at Crater Lake. In 1948, for instance, the former Wineglass CCC camp was dismantled and the materials salvaged for use in building temporary ranger stations and checking kiosks at the park's four entrances. The hospital building was completed in 1948, but in view of changing park needs it was converted into apartments for personnel housing. During 1951-52 nine two-room cabin quarters in the Munson Valley residential area were "winterized" with insulation, storm proofing, and improved heating facilities. Each cabin was enlarged with the addition of a new room. These improvements were designed to "increase the comfort and efficiency of these little homes" for year-round use, and resulted "in savings in operating costs both to the Government and the employees." In 1951 a new electric-driven pump was installed in the Munson Spring pumphouse to keep the Garfield Peak reservoir filled to capacity, thus providing the rim area with sufficient water for domestic use and fire protection.[49] During 1952 a new fire lookout was constructed on Mount Scott, replacing an old building that had been erected during the 19[illegible]0s, and a slope stabilization project was carried out at Anderson Point.[50] After some fifteen years of repeated requests for funding by park management, funds were made available in 1956 to erect new bridges over Annie and Goodbye creeks, the former being opened to traffic in 1956 and the latter in 1957.[51]

As related earlier, the decade following World War II witnessed ever-increasing visitation to the national parks. At the same time Congressional appropriations which had been reduced drastically during the war remained low, thus hindering the parks from developing their facilities and services to meet the ever-rising demands placed on them by the rising visitation. Not only was new development stymied but the existing park facilities and developments, most of which dated from the 1930s, were becoming obsolete and run-down. Thus in 1955 the National Park Service initiated a long-range 10-year program, designated Mission 66, that was intended to upgrade the units of the National Park System. The program was designed

> to so develop and staff these priceless possessions of the American people as to permit their wisest possible use; maximum enjoyment for those who use them; and maximum protection of the scenic, scientific, wilderness, and historic resources that give them distinction.

NPS officials went on to explain the goals and objectives of the program:

> Construction is an important element of the program. Modern roads, well planned trails, utilities, camp and picnic grounds, and many kinds of structures needed for public use or administration, to meet the requirements of an expected 80 million visitors in 1966, are necessary; but they are simply one means by which "enjoyment-without-impairment" is to be provided.
>
> Under this program, outmoded and inadequate facilities will be replaced with physical improvements adequate for expected demands but so designed and located as to reduce the impact of public use on valuable and destructible features. It will provide both facilities and personnel for visitor services of the quality and quantity that the public is entitled to expect in its National Park System. It is intended to assure the fullest possible degree of protection, both to visitors and resources.

By 1966, the 50th anniversary of the establishment of the National Park Service, the program was to be completed.[52]

Thus, the Mission 66 program for Crater Lake National Park was designed to bring park facilities, services, and staffing up to appropriate National Park Service standards. Park Service officials succinctly described the problems facing the park as follows:

> Developments for the safety, comfort and education of the park visitor have increased and improved over the years, but not in pace with the increased use. In fact, due to curtailed funds during World War II, park facilities deteriorated to a degree from which they have not yet recovered. In 1940, roads, trails, campgrounds and lodges, as well as personnel, were considered adequate for the 252,482 visitors. No significant additions to the operating plant have been made since 1940, yet in 1955 those same facilities, worn and depleted, were forced to serve 343,839 people. Consider the national economic picture: increased earnings, more leisure time, improved highways, faster and more comfortable transportation, and the westward population shift. It is not unreasonable to assume a travel count of 600,000 by 1966 if facilities can be provided for them. It is safe to assume that by 1966 the current inadequacy in all departments will be greatly aggravated if public facilities are not expanded and improved. Already it has overreached the point of safety. Over-use is damaging the area.

As projected in 1956 the Mission 66 program for Crater Lake was designed to include improvements and upgrading of roads and trails, interpretive programs, camping and picnicking facilities, concession services, employee housing, maintenance buildings, and staffing. The program contemplated moving the Medford office and facilities to Munson Valley where year-round park administrative headquarters would be established.

While the road circulation system was considered adequate, road widths and curvature would be improved to handle anticipated visitation levels. Rim Road in the vicinity of Kerr Notch would be relocated. To disperse the use-load one or more fire control roads that reached important natural features would be improved and opened to public travel. Trails would be restored, and increased parking would be developed at view points and interpretive sites. A new trail from the Rim Road to the lake would be constructed in a location that would obviate hand clearing of snow and have a minimum of switchbacks for visitor safety and maintenance efficiency.

Chief among the interpretive facilities that would be built was a Visitor Center. Wayside exhibits, signs, and markers would be placed on all major roads and trails to interpret significant features and themes. The system of self-guiding trails would be expanded and improved, and the Rim Road would become a self-guided tour through the use of exhibits and markers. Research efforts would be expanded, particularly in limnology, geology, botany, zoology, and archeology. A covered walkway would be constructed to the Sinnott Memorial and the building improved for winter use.

Existing camping and picnicking facilities would be expanded and improved. Increased space for trailer camping would be provided, and a new campground at low elevation would be constructed to accommodate early summer and late fall visitors. Picnic sites would be developed at various locations around the rim to satisfy a long-felt need and serve to distribute use.

Park facilities would be improved, including enlargement of water and sanitation systems and replacement of the telephone system. Storage and maintenance buildings, employee housing, and other structures for park operations would be designed and constructed for year-round use. A total of 31 permanent residences at park headquarters and one at Annie Spring were to be constructed to replace the existing substandard employee housing. A dual-purpose building to house an elementary grade school and employee recreation center would be built near the residential area. A leased radio system would be installed, connecting vehicles and outlying stations, including fire lookouts, with park headquarters. Boat storage and service facilities would be built on the lake shore at the foot of the new lake trail, and boats would be launched and retrieved by marine railway, thus permitting removal of the unsightly boat developments on Wizard Island.

The Mission 66 program proposed increases in park staffing to 37 permanent positions and annual operating appropriations commensurate with expanded activities and responsibilities. Increased efficiency in operations, however, would be effected by supplying modern tools, equipment, and facilities to obviate increases in proportion to the anticipated increase in public use. It was estimated that 70 percent more visitors could be served more efficiently by increasing present annual appropriations only 20 percent.

The total cost of physical developments projected for Crater Lake under the Mission 66 program was $5,721,200. This figure was broken down into the following components:

Roads and trails	$3,798,100
Campgrounds, picnic areas, wayside exhibits, utilities	$ 434,700
Visitor Center, employee housing, park operations structures	$1,488,400

In addition concessioner-operated improvements, estimated at $611,500, would include enlargement of the cafeteria, forty additional sleeping units with provision for fifty more if demand warranted them, and modernization of the lodge and cafeteria kitchens.

As a result of these improvements and services, Park Service officials believed the quality of the visitors' experience at Crater Lake would be enhanced. It was stated:

> When the visitor of 1966 visits Crater Lake National Park, he will meet the same pleasant and courteous treatment he encounters today, but he will find new and better services, better facilities and better accommodations. Complete information will be easily available to assist him in planning his stay at Crater Lake, regardless of his particular interest. He will have a maximum of freedom of action, consistent with park ideals. He will find Crater Lake little different than the Crater Lake John Wesley Hillman found in 1853, except there will be facilities for his comfort, his safety and his complete enjoyment.[53]

Mission 66 construction was commenced at Crater Lake in September 1956. A contract was let to the W.H. Conrad Company of Medford to construct the new Mazama Campground one-fourth-mile south of the junction of the west and south entrance roads. In addition the contract provided for development of water and sewer systems at Annie Spring and layout of new roads, trails, and walkways in the park headquarters and residential areas.[54]

Numerous development projects were carried out at Crater Lake under the Mission 66 program during 1957-59. Six picnic sites along Rim Road with a total of 21 picnic tables and 12 pit toilets were completed. The Garfield Peak and Discovery Point trails were reconstructed, and an encasement for Annie Spring was completed. The sewer and water systems were improved at park headquarters and Annie Spring, respectively, and various construction projects were completed at Annie Spring, including erection of a checking station, layout of a new parking area, and realignment of the south and west entrance road intersection. Improvements were made to Munson Spring, and two comfort stations were constructed at Mazama Campground as well as a checking station at Annie Spring. The headquarters utility area was paved, and covered entrances were added to the Administration Building and rim comfort station. Employee residences (one 4-unit and one 2-unit) were completed at Munson Valley, and a new fire alarm system was installed in the park headquarters area. The Rim Campground was redeveloped, and a new gasoline service station and employee dormitory was constructed for the Standard Oil Company of California. The new station was opened in August 1958, the former station being razed and the site landscaped. The California-Oregon Power Company constructed a new section of power line between Annie Spring and park headquarters to ensure better continuity of service. Subsequently, a power line was extended to the Mazama Campground.[55]

The Mission 66 program continued to provide major appropriations for improvements at Crater Lake during the early 1960s. In 1960, for instance, the three principal park campgrounds were improved by adding 89 new campsites and renovating roads, tables, fireplaces, and sanitary facilities at the existing sites. That same year the Cleetwood Cove Trail from the rim to the lake was completed and opened for public use. The new trail was a much improved standard alignment compared with the former trail from the vicinity of the lodge.[56] During 1961-62 six miles of roadway between Annie Spring and the rim were reconstructed and treated with bituminous surfacing. Improvements to Mazama Campground during the summer of 1962 included completion of an electrical system, addition of 56 camping sites, and opening of a 750-seat amphitheater. That summer a parking area for the lake trail was paved, improvements were made to the Sinnott Memorial, and the water system at park headquarters was expanded to include a 150,000-gallon water reservoir, assuring an adequate domestic supply and building fire protection. Six rock pedestals at the Watchman were constructed for interpretive markers.[57]

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In his annual report for fiscal year 1963 Superintendent Yeager observed that "construction projects underway at the close of the 1963 fiscal year were greater than for any previous year." The projects included reconstruction of 10.5 miles of the south entrance road and construction of three duplex residences (6 living units), a shop and equipment storage building, and a community school building. the structures were occupied during the winter of 1963-64. Interpretive roadside markers were constructed and installed. These included 26 interpretive markers at 18 locations, 21 being routed plastic signs on stone bases and 3 being routed wooden signs. Some 20 smaller signs denoting elevations and other items of interest were also completed. Fifty-four camp sites were added to Mazama Campground and a trail to the new amphitheater was completed. A 100-automobile parking area was laid out at the head of Cleetwood Cove Trail.[58]

In October 1965 the National Park Service contracted to have a new sewer system installed in the park. The new system was to replace a septic tank system which had a drain field in the east canyon of the park. The new sewer system was placed underground across the water catchment basin which fed Munson Springs, the source for the Crater Lake water system. Three manholes were placed in the system with what were later reported to be "insecure manhole covers." The location of this system would later be blamed for the water contamination crisis that closed the park for three weeks during the summer of 1975.[59]

With the completion of two more housing units in the Munson Valley area the Mission 66 program at Crater Lake was completed during the summer of 1966. As a result of the program, park buildings, utility systems, interpretive activities, and recreational opportunities had been improved to National Park Service standards. Moreover, the program's accomplishments enabled the park to centralize its year-round administrative and maintenance activities at Munson Valley, all such functions having been transferred to the park in September 1964.[60]

During the remainder of the 1960s and the early 1970s construction and development programs continued at Crater Lake, although at a considerably reduced level from the Mission 66 years. In 1967, for instance, three picnic areas were constructed at lower elevations in the park, permitting early use by visitors before snow was gone from the regular campgrounds.[61] Park construction projects during the early and mid-1970s included extension of the Watchman Overlook and Sleepy Hollow sewer systems, erection of a new concessioner's employee dormitory, improvements to the Annie Spring water and sewer systems, reconstruction of the west entrance road, and expansion of the Rim Village utility lines.[62] Following closure of the park in 1975 because of the water contamination crisis, plans were made to construct a new permanent park water system utilizing water from Annie Spring, an uncontaminated water source. The new water system, which cost some $600,000, was placed into service during the fall of 1975.[63]

During the late 1960s an extensive major parkwide planning effort was initiated at Crater Lake--a process that would take a decade to complete. The planning effort was spearheaded by a master planning team selected in 1967 from the National Park Service's Western Service Center in San Francisco. By the early 1970s the planning effort, which had gone through several draft stages, was taken over by a general management planning team from the Denver Service Center.[64] As a result of the lengthy planning endeavor Pacific Northwest Regional Office Director Russell E. Dickenson finally approved a general management plan for the park in December 1977.

The general management plan contained an extensive series of proposals for development of park facilities and enhancement of visitor experiences in the park. According to the plan, existing use patterns would remain essentially unchanged. Improved information, orientation, and interpretation facilities would allow for better utilization of the visitors' time. Lodging facilities would be decreased, while camping sites would be increased. Obsolete visitor and management facilities would be removed or replaced. Intrusion of vehicle traffic on the viewing experience at Rim Village would be reduced substantially. The Rim Village area would be restored to a more natural, pedestrian-oriented environment. Accordingly six objectives were established to govern future park development. These were to:

> Provide only those facilities on the crater rim which contribute directly to the visitor enjoyment and understanding of this natural wonder.
>
> Develop an access and circulation system which aids in reducing congestion, maximizes convenience to the visitor and park management, and provides for safe travel in the park.
>
> Provide facilities for improved interpretation, information, and orientation programs.
>
> Provide the necessary visitor-use service facilities in an area which does not infringe upon the lake-viewing experience--facilities which can be operated efficiently on a year-long basis.
>
> Provide all necessary access for the handicapped to facilities and features throughout the park, and devise ways and means to enlarge upon the experience of handicapped visitors.
>
> Provide efficient, economical, and environmentally suitable housing and administrative facilities for permanent and seasonal park employees.

The plan made a number of proposals to achieve these objectives. In terms of park accommodations capacity the plan recommended retention of the lodge for the remainder of its useful life, removal of the housekeeping cabins and fourplexes, and increases in the number of camping sites at the Mazama and Lost Creek campgrounds. The plan proposed widening of some fourteen miles of the north entrance road and west rim drive from eighteen to twenty feet minimum, repair of lake overlooks, and the addition of a bicycle lane on the one-way East Rim Drive.

Various recommendations were proposed for Rim Village improvements, the thrust of which were to remove development and return portions of the area to a natural state. It was recommended to remove the rental cabins, relocate some 185 parking spaces from the rim to the cabin area, restore some eight acres of rim parking area to pedestrian green space, construct a new lodge access road, and reorganize the existing two-acre lodge parking lot. It was proposed to construct an all-season interpretive center at Rim Village, remove the existing Exhibit and Community buildings, replace four obsolete comfort stations with two new ones, and remove excess roads in the picnic area. All new development, with the exception of the lodge access road, was to occur on existing developed land. All told, some 10 to 14 acres of development was to be removed from Rim Village with 8-12 acres being returned to a more natural state.

The capacity of Mazama Campground was to be expanded by the addition of 52 walk-in sites, central parking, and two comfort stations on 12-15 acres of partially-disturbed land. Other recommended improvements to the campground included relocation of a registration kiosk, replacement of an employee cabin with an employee residence, and construction of a camper services building.

Proposals for Munson Valley included replacement of obsolete employee housing and removal of obsolete maintenance structures. Replacement of facilities was to occur on existing developed sites. All told, a probable decrease in total land use was anticipated as a result of removal of some maintenance structures. Additional storage structures were to be added to the maintenance storage area in the southern panhandle of the park.

Various proposals were designed to upgrade the park facilities at the north entrance station. Water collection/storage system and sewage treatment facilities were to be added at the north entrance. An obsolete employee cabin was to be removed and replaced with new residences near the northern perimeter of the park. An information/orientation facility with parking area would be constructed. Two to four additional acres of land would be required for the north entrance developments.[65]

Active construction and development operations continued at Crater Lake during the late 1970s and 1980s, designed in part to follow recommendations in the general management plan. In 1979 construction of West Rim Drive was completed, thus improving automobile circulation. During the early 1980s life-safety measures were carried out at the lodge to assure visitor protection. Various improvements to park housing and recreational facilities for personnel were begun in 1984. In 1983 planning was commenced for extensive structural renovation of the Ranger Dormitory, the Mess Hall, and the Administration Building. Actual work on the Ranger Dormitory and the Mess Hall did not begin until 1985 and on the Administration Building until 1986.

The adaptive rehabilitation of these buildings restored their outstanding architectural features, while making them more usable for contemporary purposes. It has also resulted in a new appreciation of the merit of the Munson Valley structures among the park staff. In November 1986 the park administrative offices were moved into the remodelled Mess Hall, which was renamed the Canfield Building. Two months later, the Interpretive Division moved into the remodelled Ranger Dormitory, which was renamed the Steel Center. Interior remodelling of the Administration Building was completed in October 1987. The administrative offices then moved back to the Administration Building, which was renamed the Sager Building.[66]

The 1977 *General Management Plan* left the question of lodging open for resolution at such time as the existing lodge had outlived its useful life. In February 1984 an NPS planning document described the status of the lodge and Park Service planning initiatives related to its future utilization:

> Extensive studies . . . have indicated that the existing lodge cannot be renovated for public lodging in a cost-effective manner. Costs to provide structural stability and bring guest rooms up to modest contemporary size have escalated to nearly $8.6 million in 1984. The number of rooms would have to be reduced from 80 to approximately 56. In addition, the stability of the caldera in the lodge area is questionable. Although a

> catastrophic failure cannot be predicted, continued movement will require annual (and sometimes extensive) maintenance. Extensive improvements have been made to increase visitor safety, but ultimately, its use as a hotel must be discontinued. . . .
>
> It is recognized that the development of alternative lodging facilities could very likely lead to a decision to demolish the lodge; however, it must be emphasized that this decision has not been made. The National Park Service intends to pursue a thorough review of alternative uses and funding sources for the lodge before making a determination as to whether the lodge has reached the end of its useful life.

In conjunction with the lodge studies an NPS planning team from the Denver Service Center began formulating a development concept plan for the Annie Spring-Rim Village corridor of the park. This plan was to provide guidance for the orderly progression of improvements within that portion of the park and constitute an amendment to the General Management Plan. The development concept plan was necessary because desired actions contained in the approved General Management Plan had been delayed while the lodging issue remained unresolved. Although the emphasis in the proposals for the development concept plan was on lodging facilities, the major result of the new planning effort would be a significant improvement in the visitor experience in the Rim Village area and the reduction of conditions having a negative impact on the natural environment and aesthetics of the Rim Village area.

The development concept plan effort had four principal objectives. These were:

> To provide a quality, year-round interpretive program
> To provide a quality lodging/camping experience
> To reduce visual intrusions/congestion in the Rim Village area
> To reduce environmental impacts in the Rim Village area that could affect the Crater Lake ecosystem

To obtain these objectives the planning effort was based on seven underlying assumptions:

An adequate facility is needed within the park to provide audiovisual program, exhibit, and information services for summer and winter visitors.

A safe way to view the lake in the winter is essential.

Access to the Rim Village area in the winter cannot be guaranteed at all times.

Overnight lodging in the park is a desirable visitor experience; year-round lodging should be provided if feasible.

Some variety in accommodations and price range should be provided.

The existing lodge cannot be renovated to provide continued lodging in a cost-effective manner; alternative uses for the lodge structure and the possibility of its demolition will be explored.

Parking/roads will be removed from the Rim Village area to the extent feasible.

Any new construction carried out in the park under the development concept plan would follow design guidelines based on the rustic architectural theme already established in the park. The guidelines would address the basic principles of the rustic style and significant features of the style's historical application in the park.[67]

By the spring of 1985 it had become clear that all of the issues addressed in the February 1984 planning document could not be resolved in a timely manner. Thus, an Interim Development Concept Plan incorporating noncontroversial elements of the document was approved in May 1985. This interim plan contained development and expansion proposals for the Annie Creek/Mazama Campground, Munson Valley, and Rim Village areas. New studies on the lodging issue and rehabilitation of the existing lodge for "rustic" accommodations were to be conducted. Camper services were to be provided adjacent to the Mazama Campground in the area south of the campground entrance road, including a general store, snack service, shower and laundry facilities, gas station, and registration office for the budget cabins. The cabins would be developed next to the camper services, replacing the deteriorated cold water cabins in the Rim Village area. Up to 50 additional camp sites would be designed for the Mazama Campground, and a group campsite was slated at the abandoned Annie Spring Campground, pending studies to determine if there was potential for such development to contaminate the park water source at Annie Spring.

The plan called for various changes at Munson Valley. Visitor information services would be relocated from the Administration Building to the adjacent former Ranger Dormitory. This structure was already in process of being remodeled to provide additional staff offices and work space in addition to larger visitor information facilities. The existing gasoline station was to be removed and the site redeveloped to provide a landscaped parking area.

Several improvements were planned for the Rim Village area. These included removal of the dilapidated cold water cabins behind the cafeteria building and the connection of all facilities in Rim Village to the Munson Valley wastewater treatment system.[68]

After publication of the interim development concept plan various preservationist groups became actively involved in efforts to save the lodge. The immediate objective of the groups was to prolong the decision process on the fate of the lodge and the preparation of a development concept plan supplement with four alternatives for the development of lodging on the rim. As a consequence, a contract was let to Broome, Orinqdulph, O'Toole, Rudolf, Boles and Associates to prepare a technical analysis report for the rehabilitation of the lodge, and the National Park Service undertook a planning project to produce a new development concept plan supplement.

APPENDIX A

DESCRIPTION OF WATER SUPPLY, TELEPHONE SYSTEM, ROADS, AND TRAIL SYSTEM IN CRATER LAKE NATIONAL PARK--1918

WATER SUPPLY.

Park headquarters is supplied with water from Anna Spring. A hydraulic ram pumps the water into a 3,000-gallon tank 60 feet higher than the buildings, which receive their supply by gravity. The east and west entrances are supplied from Sand Creek and Castle Creek, respectively. A 200-pound pressure pump connected with a two-horsepower gasoline engine and a 1,000-gallon tank is installed at each place. The lift at Sand Creek is 250 feet and at Castle Creek 250 feet. At the south entrance the ranger carries water one-fourth mile from a spring in the forest reserve. This is the first season that the spring has been known to go dry, necessitating the making of a trail down to Anna Creek, over which the ranger now carries water. There should be installed at this place a water system similar to the ones at the east and west entrances, but it would be unwise to purchase equipment at this time, for when the road construction is finished there should be pumps, engines, tanks, and pipe to spare, and it is suggested that a water system be installed with the surplus equipment that may be available at that time.

Funds are now available for a water system to supply public camps at the rim of the lake. Equipment and material was ordered as early as possible, but delivery is slow, and it is doubtful if the pump will be received in time to be installed before winter. However, it will be ready for the 1919 season.

Crater Lake Lodge is supplied from a spring about 2,500 feet south and 400 feet lower than the lodge. The water is pumped by a hydraulic ram, with a pump and 1-horsepower gasoline engine as an auxiliary, to a 3,000-gallon tank near the lodge. It is again pumped into a 1,000-gallon pressure tank for delivery to the lodge. There are some weak points in this system. It sometimes fails, and considerable fault could be found with it.

All the water in Crater Lake Park, including that of the lake, is exceedingly cold and clear, and has been found by scientists to be exceptionally pure.

TELEPHONE SYSTEM.

The Park Service controls 20 miles and the United States Engineer Department 31 miles of telephone line in the park. The Engineer Department has 14 miles of line outside the park, connecting the eastern entrance with Kirk, at the end of the railroad.

The west entrance is connected with a line to Prospect, 19 miles, in which the park holds considerable interest. This line is valued principally for fire control and also to receive reports of stages and travel coming in from the Medford side. Twelve miles of this line is through the forest reserve, and by mutual agreement the Forest Service maintains 9 miles of it.

This line was built by a community of interest—private contributions and some assistance from Jackson County. A movement has been started which may result in the complete control of this line by the Park Service.

All service over the park lines, including that to Kirk and Prospect, is free, and, considering the temporary nature of much of the line, the service is very good.

The park system connects at the south entrance with the Klamath Telegraph & Telephone Co.'s line to Fort Klamath, 9 miles. A three-year contract has been made with this company, whereby they have free service over all park lines, in exchange for which they maintain 6 miles of line from the south entrance to park headquarters for 12 months and 3 miles of line from headquarters to Crater Lake Lodge for 4 months each year. They also keep telephones in repair on this line and give free service for all Government business between the park and Fort Klamath.

ROADS.

There are four roads in the park system, known as Pinnacles, Medford, Fort Klamath, and Rim Roads. The Pinnacles Road, 5.25 miles, connects the east entrance with the Rim Road at Lost Creek. The Fort Klamath Road, 11.4 miles, connects the south entrance with the Rim Road at Government Camp, 2 miles south of Crater Lake Lodge. The Medford Road, 6.84 miles, connects the west entrance with the Fort Klamath Road at park headquarters. These three roads have been open for travel since 1913, and are in good condition for dirt roads. The Rim Road, 35 miles, circles the lake. From Cloudcap to the Watchman, 21 miles, it has been open for travel since 1916, and is in fairly good condition for a dirt road. However, considerable improvement work will be necessary before the 14 miles connecting Cloudcap and the Watchman, via the north side of the lake can be utilized." The 1919 season will be well advanced before this road can be used for the full 35 miles by the traveling public, but when completed it will afford a drive of unsurpassed beauty. The total length of roads in the park is [illegible] miles, and the maximum grade is 10 per cent. Many sandy stretches are encountered on the Rim Road which should be given a liberal supply of pumice gravel as soon as funds are available for such work.

TRAIL SYSTEM.

The following-named trails make up the park system: The Watchman, 8.5 miles; Garfield, 1.5 miles; Lodge to lake, 1.5 miles; Wizard Island, 0.75 mile; Lewis, 2.05 miles; to Rim, south side, 1 mile; park headquarters to Rim, 3 miles; Copeland Creek, 2.5 miles; Union Peak, 4 miles; Red Blanket, 7 miles; total, 25 miles.

A trail of very easy grade, on which horses and burros are now used, leads from the Rim near Crater Lake Lodge to the water, a descent of 900 feet, and visitors to Wizard Island find a good trail to the crater.

There is an excellent trail to the top of Garfield Peak. The one to the Watchman is a winding trail, passable for horses, and the lake is in full view for the entire distance.

The Lewis trail is passable for autos. It affords a good view of Anna Creek Canyon and Lewis Falls.

An easy trail to Union Peak will be open for 1919 season. It will be possible for light vehicles for about 3 miles. The remaining distance to the base of the peak will be a good horse trail. The last one-fourth mile to the top of the peak must be made on foot. It is very steep, but the footing is good and the climb is easy. It ascends 700 feet in one-fourth mile. The view from the top of this peak is well worth the climb.

The Red Blanket trail extends past Union Peak to Bald Top and Red Blanket. It was constructed this year. It is very rough and steep. It connects with a ranger trail in the forest reserve near the southwest corner of the park. It is valuable as a patrol trail and also in case of fire.

Annual Report of the Director of the National Park Service, 1918, pp. 160-61.

APPENDIX B
PHYSICAL IMPROVEMENTS
CRATER LAKE NATIONAL PARK
1928

1. Road System: Total 67 miles, consisting of 4 miles pavement, 21 miles of oil macadam, and 42 miles of dirt road. The dirt roads are extremely difficult to maintain because the soil is light volcanic ash and pumice which displaces almost as readily as fluid.

2. Trails: 36 miles, of which 33 miles are widely scattered and are used as much for protection as by visitors. Three miles consisting of the trail down the crater wall to the lake and the trail to the summit of Garfield Peak are used by at least 30,000 people annually; they contain such elements of hazard that their safe maintenance consumes practically all of our inadequate trail allotment.

3. Telephone System: 46 miles of iron wire, grounded system. Within the park this line serves a total of 26 telephones placed in various administrative units; on the west boundary our line joins that of the Forest Service; to the south connects with the Klamath Telephone Co.; and to the east with the Indian Service. This telephone system is a good one of its type but no longer suffices for the greatly increased use to which it is put by the public particularly, there are no telegraph lines extended into the park.

4. Public Buildings: Anna Spring: 1 superintendent's house, 1 ranger station, 1 bunk house used as a residence, 1 warehouse, 1 barn, 2 modern toilets in adjacent campground, 2 small shacks. These are all frame structures.

   Park Headquarters: 1 small 1-room log cabin, 1 2½ story log cabin used as a kitchen, messhall, and bunk house for a crew of about 40 men; 1 log cabin remodeled and used now as the administration building; 1 warehouse; 1 barn; 3 open latrines; 1 comfort station; 1 employee's cabin.

   Lost Creek: 1 combination mess hall and bunk house for a crew of approximately 15 men; 1 log shack used as a store house until it collapses; 2 open latrines.

   Wine Glass: 1 combination bunk house, 1 decrepit storehouse about 12' x 20'.

   Devils Backbone: 1 combination bunk house; 1 old frame storehouse about 10' x 16'.

   East Entrance: 1 2-room log cabin; 2 open latrines.

   South Entrance: 1 2-room log cabin; 2 open latrines.

West Entrance: 1 2-room log cabin; 2 open latrines.

Rim Auto Campground: 1 small community house already entirely inadequate for its purpose; 2 modern toilets; 2 complete comfort stations; 2 sheds housing 5 wood water tanks.

At winter headquarters - Medford: 1 superintendent's residence; 1 2-car garage; 1 warehouse and garage.

Miscellaneous: 1 fire lookout station on Mt. Scott; 2 open latrines at foot of trail to the lake; 1 boat landing at Wizard Island; 1 new comfort station at foot of new trail to lake; 1 pump house, new.

5. Water System: 6 pumping plants with lift varying from 40' to 700'; one each at the south, west, and east entrances, one at the Rim campground, one at the Backbone, and one at Wineglass. A gravity system takes care of our needs at Headquarters, and a hydraulic ram at Anna Spring.

Concessions: The Crater Lake National Park Co. operates one hotel of 150 rooms and a number of tent houses in connection; a transportation service with 6 7-passenger Hudson coaches operating from Klamath Falls and Medford; a launch and boat service on the Lake; a gasoline service station below headquarters which is operated by the Standard Oil Co. as agent; and are constructing in July, 1928, a cafeteria, general store and small rental cabin group.

The Kiser's, Inc. operates a photographic studio on the Rim.

Campgrounds: There are 9 campgrounds, as follows: Wheeler Creek on the East road; Lost Creek, junction of East and Rim roads; 2 at Anna Spring; 1 below Headquarters on main road; Cold Spring on south road; Cold Creek on South road; White Horse, west road; one at Rim; these are in various stages of development in proportion to popularity, running from no development at Wheeler Creek to intensive development in the big camp grounds at the rim which contains a community house, 4 comfort stations, shower baths, electric light, etc. The camping facilities in this park can be extended indefinitely and at relatively small cost.

Crater Lake National Park, Oregon [1928], RG 79, Central Files, 1907-39, File No. 302, Part 5, Crater Lake, Appropriations, Estimates.

APPENDIX C

EXPERIENCES OF A CCC ENROLLEE AT CAMP WINEGLASS, 1934

Camp Wineglass was in a beautiful setting about 3 miles from the ranger station [at Lost Creek], and close to a general road that went to Fort Klamath, where our mail arrived. Fort Klamath was a site of a small Indian agency headquartered there at that time.

We lived in tents with wooden floors and wooden sides about 4' high, heated with one small heater. They looked like ice cream cones turned upside down, but they sure done [sic] the job. Our first job after arriving from Calif. was snow removal from the Lake Area road and side wall going to the lodge. The personnel were mostly from Illinois with some from Mich. and East Coast and Florida (19 colored guys from there). They lived in a separate area not integrated with the whites.

The work was done in the spring and summer of 1934. We were concentrated in tents according to the alphabetical listing of your last name (8 men to a tent). I was in Company C, along with other people with names beginning with C and D. Hence the whole lot of enrollees were in different Co.'s. There were about 250 men to a camp. Each one of these companies had a leader and an assistant, whose job it was to see that every man was up for roll call, breakfast at a certain time, beds made, tent cleaned, sides rolled up and ready for work detail on the grade by 7:30 A.M. Most of our work at Camp Wineglass consisted of road work, building roads so that fire trucks could get close to the fires. We had our own truck drivers (I was one). We worked with long handled shovels, picks, grubbing hoes, brush axes etc., and were fed hot meals on the job. Army field ranges were set up outside and meals were prepared and served army style (we ate out of mess gear and canteen cups). We loved it (until we constructed our latrines, play rooms, mess hall ourselves); our wash house was a small creek that run [sic] ice cold and clear water near our tents; we used that water for our hygiene purposes, cooking, drinking, washing teeth etc., and I know of no one who got sick from it. A far cry from today's polluted streams.

We built sidewalks up at the lake and also some log cabins, under supervision of Forest Rangers all local men, all very good men, they also helped with the supervision of the work details. There was 11 camps in the Medford District, under the direction of a Mr. Dickner, who was a very respected man. He may have been from Klamath Falls.

[illegible].S. This is a brief synopsis of our work performed. There was something like 2½ billion small trees planted by the C's overall. We fought some forest fires too. . . .

President Roosevelt and Robert Fechner visited Camp Wineglass briefly. We put on a show for them and their party. We had the best camp of the 11 in the Medford District.

We had really good boxers and wrestlers and a championship baseball team.

William Bill Coulson
September 29, 1986

Letter in Museum Collection, Crater Lake National Park.

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ENDNOTES

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2. Lane to Mather, May 13, 1918, RG 48, Central Classified Files, 1907-36, File No. 12-0, Administration, Part I.

3. Annual Report of the Director of the National Park Service, 1918, pp. 61-62. The annual report contained a description of the water supply, telephone system, roads, and trails in the park. This data may be seen in Appendix A.

4. Annual Report of the Chief of Engineers, 1919, Extract, Crater Lake National Park (Washington, 1919), Library Collection, Crater Lake National Park.

5. Annual Report of the Director of the National Park Service, 1919, pp. 82-84, 218.

6. Alex Sparrow, Superintendent to the Director, National Park Service, August 26, 1920, RG 79, Central Files, 1907-39, File No. 207-001, Part 2, Crater Lake, Reports, Annual.

7. Annual Report of the Director of the National Park Service, 1921, pp. 82, 223.

8. Annual Report of the Director of the National Park Service, 1923, pp. 65-67, 143.

9. Annual Report of the Director of the National Park Service, 1924, p. 119, and Joseph H. Farney, "The Lure of Crater Lake," Union Pacific Magazine, IV (June, 1925), 31-32.

10. Annual Repor [illegible] the Director of the National Park Service, 1925, pp. 103-04.

11. Crater Lake National Park, Development Outline, Road and/or Trail System Plan, March 1944, RG 79, Region IV, Central Classified Files, Crater Lake, Box 11, Folder 600.01, Part I, Master Plans, FRC, San Bruno.

12. Annual Report of the Director of the National Park Service, 1926, pp. 40-41, 115-16.

13. Vint to Thomson, July 31, 1926, RG 79, Central Files, 1907-39, File No. 900-02, Part I, Crater Lake, National Park Concessions, Crater Lake

National Park Company. Among other comments Thomson recommended that cabins be built at Government Camp to house park employees currently living in tents and that Munson Meadows be developed as a campground. Wherever possible campgrounds "should be of sufficient area to permit rotation and thus prevent complete destruction of vegetation."

14. *Annual Report of the Director of the National Park Service, 1926*, pp. 40-41, 115-16.

15. "General Statement, Crater Lake National Park, Oregon" [1926], RG 79, Central Files, 1907-39, File No. 302, Part 3, Crater Lake, Appropriations, Estimates, 1924-27.

16. "Report on Naturalization in the Rim Area," by Merel S. Sager, Assistant Landscape Architect, November 18, 1932, RG 79, Central Files, 1907-39, File No. 207.

17. Annual Report, Crater Lake National Park, 1927, RG 79, Central Files, 1907-39, File No. 207-001, Part 2, Crater Lake, Reports, Annual.

18. "Report on Construction Activities in Crater Lake National Park, Season 1928," by Ward P. Webber, Resident Engineer, January 25, 1929, RG 79, Central Files, 1907-39, File No. 631-2, Part 2, Roads Budget, General, Crater Lake, 1928-30.

19. Annual Report, Crater Lake National Park, 1928, Files, Superintendent's Office, Crater Lake National Park. See Appendix B for a list of physical improvements in the park as of 1928.

20. *Annual Report of the Director of the National Park Service, 1928*, p. 13.

21. *Annual Report of the Director of the National Park Service, 1929*, pp. 65-66, and "Final Construction Report on Sewage Disposal System, Park Headquarters, Account No. 481," by Ward P. Webber, Engineer, August 7, 1931, RG 79, Central Files, 1907-39.

22. *Annual Report of the Director of the National Park Service, 1930*, pp. 85-86, and "Final Construction Report of No. 406, Employee's Cottage at Headquarters," RG 79, Central Files, 1907-39, File No. 620-058.

23. Crater Lake National Park, "Report on Operations and Approved Construction Projects, Season of 1931 (1932 Fiscal Year)," E.C. Solinsky, Superintendent, n.d., RG 79, Central Files, 1907-39, File No. 207, Report on Operations and Approved Construction Projects, Season of 1931 (1932 Fiscal Year). Also see Crater Lake National Park, "Report of 1931 Construction Activities, As of November 1, 1931," by W.E. Robertson, Associate Engineer, File No. 207, *Ibid*., and Kerr to Solinsky, October 12, 1931, RG 79, 67A618, Box 6, File 661, Electrical System - Crater Lake, FRC, Seattle.

24. National Park Service Rustic Architecture: 1916-1942, pp. 67-68. For more information on these structures see U.S. Department of the Interior, National Park Service, Park and Recreation Structures, Part I - Administration and Basic Service Facilities, by Albert H. Good, 1938, pp. 86-87, 158.

25. Annual Report, Crater Lake National Park, 1932, RG 79, Central Files, 1933-49, File No. 207-001.2, Part One, Crater Lake, Reports (General), Directors Annual Report, and Annual Report of the Director of the National Park Service, 1932, p. 41. Further data on construction activities in the park during 1932 may be found in "Report to the Chief Landscape Architect Through the Superintendent of Crater Lake National Park, A Summary of Construction During the Season of 1932," by Merel S. Sager, Assistant Landscape Architect, October 29, 1932, and "Report on 1932 Field Activities, Crater Lake National Park," by William E. Robertson, Associate Engineer, November 1, 1932, RG 79, Central Files, 1907-39, File No. 207.

26. "Report to the Chief Architect Through the Superintendent of Crater Lake National Park," by M.S. Sager, Assistant Landscape Architect, Emergency Conservation Work, Camps Nos. 1 and 2, October 13, 1933, RG 79, Central Files, 1933-49, Crater Lake, File No. 207 - Sager.

27. "Report to the Chief Architect Through the Superintendent of Crater Lake National Park," by Merel S. Sager, Assistant Landscape Architect, October 16, 1933, RG 79, Central Files, 1933-49, Crater Lake, File No. 621, Construction Projects.

28. See Appendix C for the reminiscences of an enrollee at Camp Wineglass during 1934.

29. David H. Canfield, Acting Superintendent to the Director, National Park Service, August 8, 1934, RG 79, Central Files, 1933-49, File No. 885-01, Part 2, Crater Lake, Protection, Service to Public and Forestry, Forestation, 1934, and Acting Associate Director to Superintendent, Crater Lake National Park, May 1, 1934, RG 79, 67A614, Box 4, File No. 600, Third Enrollment Period, FRC, Seattle.

30. "Report to the Chief Architect Through Superintendent of Crater Lake National Park, E.C.W.," by Francis G. Lange, Landscape Architect, October 22, 1934, RG 79, Central Files, 1933-49, File No. 885-01, Part 1, Crater Lake, Reports.

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CHAPTER FOURTEEN

MAINTENANCE ACTIVITIES IN CRATER LAKE NATIONAL PARK: 1916-PRESENT

During the early years of National Park Service administration, maintenance activities at Crater Lake National Park were performed by seasonal crews under the direct supervision of the park superintendent. Many of the laborers were young men who worked in the park during their summer school vacations. Local sawmills provided stiff competition, however, by paying higher wages. Thus it was often difficult for Superintendent Sparrow to find plentiful labor. Nevertheless he reported in 1922 that he hired "a crew of from 30 to 40 men" for "general maintenance and construction work" between July 1 and September 30. During the summer of 1923 about 50 men were employed for similar purposes.[1]

A report prepared by Sparrow in August 1920 provides a glimpse into the nature and extent of maintenance activities in the park during the early years. Some 49 miles of park roads were repaired and regraded during fiscal year 1920 at a cost of $4,862.97 or $99.24 per mile. The cost of administration for the road maintenance was $190.37 or 3.91 percent of the total. The roads to Crater Lake Lodge were cleared of snow by June 26, and the Rim Road around the lake was cleared of snow on August 2, the latter being accomplished with "a liberal use of T.N.T. to remove deep drifts." The snow removal efforts were aided by personnel of the park concessionaire.

Twenty-three miles of trail were cleared and repaired, the most costly being the 1.2-mile stretch from the rim to the boat landing where many slides occurred every spring. The trails were maintained and repaired at a cost of $694.48 or $30.20 per mile. The cost of administration of the trail work was $11.12 or 1.6 percent of the total. The trails maintained were Watchman, Garfield, Wizard Island, Rim to Lake, Copeland Creek, Dewie, Anna Spring to Rim, and Union Peak.

Building maintenance during fiscal year 1920 was carried out at a cost of $719.62. The superintendent's residence at Anna Spring and the ranger's cottage at the south entrance were repaired and painted. The log rangers' cabins at the east and west entrances were varnished, and the roofs of all buildings, including those at Government Camp, were painted.

Fifty-four miles of telephone line, thirty-four of which was of temporary construction, was repaired and kept in operation during the working season. Eight miles were maintained all year. Total cost of telephone line maintenance was $373.87 or $6.92 per mile.

Seven free campgrounds were maintained at a cost of $383. The campgrounds were located at the Rim, Anna Spring, Cold Spring, White Horse, Lost Creek, Wheeler Creek, and Munson's Meadow.[2]

In his annual report for 1922 Sparrow devoted considerable attention to maintenance operations in the park. His discussion included sections on roads, trails, telephone system, buildings, and miscellaneous maintenance and improvements:

> ### Roads
>
> Clearing the roads of snow in the spring, replacing wood culverts with galvanized iron, repairing bridges, and constant regrading and graveling of the more badly worn sections of the 57 miles comprising the park road system, requires a crew of 30 men and 12 to 16 horses throughout the season, besides motor trucks and other equipment. But even with the expenditure that this entails there are some stretches of road that are so dusty and rutted, owing to the ash-like texture of the soil, that it is a hardship to ride over them.
>
> ### Trails
>
> There are 34 miles of trails in the park system, made up of 11 short units of which the shortest is three-quarters and the longest 8 miles in length. About two-thirds of the funds allotted for trail maintenance are expended on the trail from Crater Lake Lodge to the boat landing on the lake, 1⅛ miles, but at least four-fifths of the travel by trail is over this section. . . .

> ### Telephone System
>
> All of the 48 miles of telephone line comprising the park system was practically rebuilt this season and gives a better service than ever before.
>
> ### Buildings
>
> A new floor was laid in the sleeping quarters for crew at Government Camp; the roofs of the mess hall, office, and shelter cabin painted; and new joists and ceiling put in the shelter cabin. A temporary protection to portable oil tank was erected at Government Camp. Tanks and tank houses were erected at Devils Backbone and Wineglass for supplying water to maintenance crews and automobiles making the rim drive. The fence around Government buildings at Anna Spring was rebuilt, and a new cesspool dug at that place to take care of sewage from the ranger's house. Eight dry toilets on public camp grounds were moved and new vaults dug. The location of wash and bath house for crew at Government Camp was changed, the old building torn down and rebuilt on the new site, and the entire water system at Government Camp amplified and improved.
>
> ### Miscellaneous Improvements
>
> A gasoline pump and 500-gallon tank were installed at Government Camp, the oil shed moved and improved, and several dying trees removed from the grounds as a protection to buildings.[3]

Various Park Service reports during the early 1920s indicate that park maintenance efforts consisted primarily of varied improvement projects. In 1923, for instance, Superintendent Thomson reported that "a large amount of miscellaneous work was accomplished." The list of varied projects included:

> Disused corral fences were taken down; all living areas thoroughly policed; equipment gone over and renovated; accumulations of manure and trash disposed of; new cesspools made; rub logs placed at certain critical points; additional latrines put up at three entrances and two camp grounds; sanitary drinking fountains installed at Anna Spring and at the west entrance. By felling 4 large and 11 small trees a lovely canyon was opened on the main road. The public camp grounds were so popular that it was necessary to extend them; two men maintained them immaculately throughout the season.

In addition all permanent buildings at Anna Spring were painted "tobacco brown with dark green roofs," and several dilapidated structures were razed and the material salvaged.[4]

The following year Superintendent Thomson reported that "major effort has been directed toward road maintenance, but a considerable amount of miscellaneous work has also been accomplished." This work included

> the roofing with shakes of the west and east entrance cabins and the Anna Spring bunk house; reconstruction in whole or in part of four bridges; construction of two new latrines near the boat landing; construction of a new powder house; erection of an appropriate log boundary arch; shingling of tank house; installation of small generating sets at Government Camp and the Rim; improvement of water-heating devices at the Rim comfort station; painting or staining of several structures; erection of new park signs; repair of buildings; and a general overhauling of trucks, pumping, and miscellaneous equipment.[5]

In 1925 Superintendent Thomson observed that "as usual, endeavor necessarily was concentrated upon road maintenance, sanitation, and all those other problems incidental to the safety and comfort of tens of thousands of visitors." Beyond that "a considerable miscellany of alteration and repair was accomplished," including

> new shake roof on two buildings, alteration and painting of superintendent's residence, new floors and windows in the information office, remodeling of kitchen at Government camp bunkhouse, installation of generating plant and wiring of Anna Spring buildings, construction of a fine massive log arch at south entrance, some general painting and staining, and a general clean up of functional areas. Much of our alteration was accomplished with material salvaged from condemned structures.

More than twenty percent of the park road funds were devoted to snow removal, and heavy spring slides necessitated an unusual amount of work on the trail to the lake, practically exhausting the entire park's trail allotment.[6]

Snow removal, especially during years of heavy snowfall, was a major undertaking of park maintenance crews. For instance, the winter of 1926-27 witnessed a total snowfall of more than 51 feet, the snow being heavily compacted by spring thaws. This amount of snow was difficult to remove, since there was no mechanical snow removal equipment available. To permit visitors to enter the park it was necessary to clear more than fifteen miles of heavy snow by using explosives and shovels. This gargantuan feat was finally completed on July 2, thus causing the park's 1927 summer season to commence five weeks later than the year before.[7]

By 1929 park maintenance operations had been assigned to various departments, including engineering, landscape, sanitation, electrical, and mechanical. This division of responsibilities for maintenance would continue into the 1940s. The engineering department was in charge of Engineer Ward P. Webber who was connected with the field headquarters office in San Francisco and loaned to the park during the travel season. The division had charge of road and trail maintenance and improvements, snow removal, and building upkeep. Concerning these responsibilities and related problems, Superintendent Solinsky observed:

> Road maintenance--Due to the lack of proper equipment, maintenance work was held to a minimum, with the result that all of our roads, with the exception of about 22 miles of pavement, were in very poor condition. The soil in this vicinity is principally a dry pumice ash and makes an extremely poor roadbed, with the result that our roads become very dusty and rough and are very disagreeable to travel over. This is particularly true of the Rim Road.
>
> Snow removal--There is no mechanical snow removal equipment in this park, and it becomes necessary each spring to expend considerable sums for labor to clear our roads of snow in time for the opening date. The roads of the park were opened this season on the following dates: Klamath-Medford Loop, June 12; Anna Spring to Rim, June 22; east entrance, June 24; north entrance, July 6; Rim Road, July 13.
>
> Road improvement--The east entrance road from its connection with the Dalles-California Highway to the park entrance, a distance of approximately 5 miles, was reconstructed and surfaced with crushed rock. This road was also improved in a like manner for a distance of 1.9 miles within the park boundary.

> The pavement on the Government camp Rim Road had to be torn up, reprocessed, and relaid. This was due to improper mixing last fall during the cold weather. A crew of three men were employed during August in repairing and patching holes in the paved park roads.

As to building maintenance Solinsky noted that the interiors of the new employees' residences at Government Camp were painted.

In 1929 the sum of $1,500 was allotted to the park for roadside cleanup and landscape improvement. The work was confined to one mile along the Anna Spring-Government Camp road. Debris and trash, resulting from road and trail construction, were cleaned up in the rim area, and planting was done to eliminate the dust.

The sanitary department was handled by a crew of four men with the use of a light truck. The campgrounds were kept clean, and garbage and refuse from the camps and concessioner facilities were disposed of on a daily basis.

The park electrical department kept the telephone system in repair, and the mechanical department under the direction of a master mechanic (with the aid of several seasonals) had charge of the overhaul and repair of park vehicles and equipment. While the vehicles and equipment had been overhauled during the fall and winter, the park vehicles were a continuing source of trouble and expense. With the exception of two trucks, all of the park vehicles "came from war surplus stock" and had "long since outlived their usefulness."[8]

Road maintenance and snow removal operations in the park were facilitated by the acquisition of new equipment in 1930. According to Superintendent Solinsky marked improvement was made in the condition of Rim Road and the north and east entrance roads with the "new road equipment and funds that allowed extensive work in grading and smoothing up the road surfaces." Because of the heavy increase in travel, considerable maintenance was necessary on the oiled roads. Several sections, ranging in length from ½ to 1½ miles, had to be torn up, reprocessed, and relaid. The type of pavement used on these roads was such, according to Solinsky, that "with the increasing use each year the annual maintenance costs will increase until such time as a more permanent pavement can be laid."

In 1930 snow removal from roads was aided by the acquisition of a new "mechanical snow remover"--a Bates 80 tractor with rotary snow plow and Hall backfiller attached. With its use the road to the rim from both the south and west entrances was open to traffic on May 24, the earliest opening date in the history of the park. The north entrance and Rim roads were open to travel on June 26, the earliest that either road had been opened.

Solinsky noted that considerable expense was necessary in opening and clearing the slides from the Crater Wall Trail. The trail was "so located with the number of switchbacks on the loose sliding sides of the crater wall that it necessitates handling of the slide material several times before it can be disposed of." This in turn made the "annual maintenance costs exceedingly high and out of proportion to its original cost."

Roadside cleanup continued to be a major concern of park maintenance in 1930. Using an allotment of $4,000 some five miles were cleared of debris and trash.[9]

In May 1931 Superintendent Solinsky reported on the park snow removal operations to NPS Director Horace Albright. He observed that the park's snow plan

> has proven the theory that it is much easier and more economical to remove the snow while it is still soft or following each of the winter storms rather than to wait until spring when the snow becomes packed and almost solid ice.

Snow plow operations had started on November 15, and two operators were employed at a salary of $100 per month each plus board.

Solinsky went on to describe the advantages of snow removal operations and its impact on park operations and visitation. Among other things he noted:

> Another fact to be considered is that we are able to set a definite date for the opening of our park roads with assurance that the park will be opened on the date set. Last fall we set April 1 as the date on which we would open the park and permit visitors to travel to the Rim. On March 31 I drove from Medford through the West Entrance to the Rim without the use of chains on my car. Visitors entered the park from both the South and West Entrances and drove to the Rim on April 1 and the roads have been maintained and kept in good travelable condition ever since. We have received many congratulatory expressions from all who have visited the lake during the past month and I am sure that the early opening of the park has met with much favorable enthusiasm from everyone.
>
> Notwithstanding the fact that April proved a rather stormy month and provided very few good days for travel, over 6,000 people in about 2,000 cars visited Carter Lake during the month. We registered cars from twenty-four states and two Canadian provinces. I feel that it is well worthwhile to open the park early for the reason that we have many eastern visitors traveling up and down the Pacific Coast during April and May who have never had the opportunity of visiting Crater Lake while passing through this locality. I believe it quite important that these people, particularly the easterners, be given the opportunity of visiting the park and think the advertising we receive through this contact is well worthwhile.
>
> I am quite sure that you will agree that we have received a lot of very favorable publicity throughout the important papers on this coast in connection with the early opening of Crater Lake. We have taken a number of pictures and have broadcast them through the press and we have also taken a number of reels of moving picture film which show the Snogo plow in operation and some splendid winter scenes about the park including a reel or two taken from a boat on Crater Lake early in March on a day when the reflections were perfect. We plan to use these reels in our lectures during the coming season[10] and I am sure they will prove most interesting to the visitors.

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Itemized report of weather conditions and cost of snow plow operation for Crater Lake winter 1930-31:

Month	Stormy days	Total snow fall	Greatest depth	Days snow plow operated	Miles plowed	Gals. Cost: @ .18½¢		Gals. Cost: @ .35½¢		Labor:	Repair: parts:	Grand Total
Nov.	5	54"	39"	10	173.9	906	$ 167.61	15	$ 5.33	$ 154.56		$ 327.50
Dec.	9	40"	38"	8	120.2	530	98.05	7	2.49	276.00	$ 22.40	398.94
Jan.	11	53"	60"	18	235.6	1404	259.74	25	8.87	276.00		544.61
Feb.	7	44"	73"	7	93.8	530	98.05	10	3.55	264.96	49.00	415.56
Mar.	15	59"	84"	19	255.6	1638	303.03	25	8.87	276.00		587.90
Apr.	7	21"	78"	8	119.4	714	132.09	15	5.32	44.16	10.00	417.89
	54	271"		70	909.5	5722	$1058.57	97	$34.43	$1518.00	$ 81.40	$2692.40

Snogo Model 58 rotary snow plow used in this operation.

Snow plow operations started November 15th.

Operators paid at rate of $100.00 per month and board.

Snow measurements shown taken at Government Camp. Approximately 50% more snow removed from road than precipitation shows on account of drifting in road cut.

Average depth at Rim April 1 - 10 feet, drifts up to 17 feet deep between Government Camp and Rim were kept open.

The winter of 1931-32 taxed the park's snow removal capabilities to the limit. All known records of snowfall in the park were broken as 65 feet of snow fell at Government Camp and between 85-90 feet fell at the rim. Despite the heavy snowfall the park was able to keep "the upper sections of the park roads, from the Rim to points below Annie Springs towards both the west and south entrances, open all winter" with one rotary snow plow. It required two crews of two men each working almost constantly during the months of December and January to remove the snow from the upper park roads. During those months the plow was operated continuously for 117 eight-hour shifts, an average of approximately sixteen hours per day. The south entrance road was open to the public on April 10, and the west entrance road on May 5. The delay in opening the west entrance road was caused by the refusal of the State Highway Commission to open its section of the highway from Union Creek to the west park boundary, and "considerable persuasion" by the Medford Chamber of Commerce and local residents was necessary to get the commission to take action. Heavy snow drifts delayed the opening of Rim Road until July 26.

Road and trail maintenance continued to pose problems for park management in 1932. Lack of funds for proper road maintenance resulted, according to Superintendent Solinsky, in "rather unfavorable comments from park visitors, due to the rough and cut-up condition of these highways." As all of the park highways were of "the light oil mixed type," they required "constant attention under heavy traffic to keep them in travelable condition." According to Solinsky, "a vast amount of work" was required if these highways were "to be maintained in as good condition as the state highways leading to our park entrances." Of primary importance in this work was the necessity for widening the shoulders to support the pavement, resloping of the cut banks, and rounding of the slopes.

Because of the heavy snows during the winter the Crater Wall Trail was not opened until July 1. After the snow banks had melted, slides continued to fall on the trail, in some places almost obliterating it. The cost of maintaining the trail was extremely heavy with large cracks appearing in its path after the snow melted, thus leading to concern that sections of it could be lost.

In 1932 roadside cleanup was carried out along the south entrance road from Annie Spring to the south park boundary. This completed all the roadside cleanup work along the completed park highways with the exception of approximately two miles on the west entrance road."[11]

By 1934 road maintenance had become a critical problem for park operations. Lack of adequate maintenance of hard surface roads, coupled with the heavy visitation of the previous several years, had caused the roads to become potentially dangerous. During the year funds became available to purchase a road patching machine and commence repairs "which consisted mainly of patching the more dangerous chuck holes that had developed in profusion."[12]

Low appropriations and staffing levels prevented the park from instituting a comprehensive building maintenance program for many years. Following the visit of Secretary of the Interior Harold L. Ickes in 1934, however, a major program was authorized for rehabilitation and completion of existing park structures. In January 1935 a survey was made of nearly 60 park buildings [a copy of the survey may be seen on the following page] by Superintendent of Construction E.E. Etherton, analyzing "how the Government can complete, repair, and improve its property to the condition in which such property should be, to safeguard its investment, and also to prevent the buildings from falling further into disrepair or obsolescence." The general conclusions of Etherton as to the condition of park structures were appalling and led to calls for greater appropriations for building maintenance and the correction of these problems. Etherton described in rather stark terms the dilapidation of park structures. He observed that the

> condition of the buildings in the park is such that thorough modernization is not only impractical, but too costly. There is

INVENTORY OF PARK STRUCTURES: 1935

Ranger Dormitory	Park Headquarters
Machine Shop	Park Headquarters
Messhall	Park Headquarters
Warehouse	Park Headquarters
Equipment Shed	Park Headquarters
Fire House	Park Headquarters
Gas Station	Park Headquarters
Comfort Station	Park Headquarters
Garage and woodshed	Park Headquarters
Blacksmith Shop	Park Headquarters
Grain Storage Shed	Park Headquarters
Administration Building	Park Headquarters
Barn	Park Headquarters
Lumber Sheds	Park Headquarters
Residence No. 8	Park Headquarters
Residence No. 7	Park Headquarters
Residence No. 6	Park Headquarters
Residence No. 5	Park Headquarters
Residence No. 4	Park Headquarters
Residence No. 3	Park Headquarters
Residence No. 2	Park Headquarters
Residence No. 1	Park Headquarters
Ranger Residence	North Entrance
Watchman Observation Station	Watchman Peak
Checking Kiosk	North Entrance
Information Bureau	Rim Area
Community House	Rim Area
Comfort Stations (4)	Rim Area
A Lower Station	
B East Station	
C Central Station	
D Cafeteria Comfort Station	
Sinnott Memorial	Rim Area
Mt. Scott Lookout	Mt. Scott
Pumphouse	
Comfort Station - Employees' Campground	
Employees cabins (4) - Employees' Campground	
Cabin A	
Cabin B	
Cabin C	
Cabin D	
Ranger Station (Log Cabin)	Annie Spring
Checking Kiosk	Annie Spring
Residence (Board and Batten)	Annie Spring
New Comfort Station	Annie Spring
Two old comfort stations	Annie Spring
Old Superintendent's residence	Annie Spring
Two ranger cabins	Annie Spring
Barn	Annie Spring
Checking Station	West Entrance
Superintendent's Residence	Medford, Oregon
Warehouse	Medford, Oregon
Checking Station	East Entrance
Ranger Station	Lost Creek
Old Barn	Lost Creek
New Barn	Lost Creek
Wineglass	Wineglass
Old Tank House	Rim Area
Electric system	
Water and sewer systems	
Telephone system	

> not one that is completed, all are in dire need of repairs, and many will have to be improved to meet the demands placed upon them. It is difficult to conceive how an organization could have allowed such squandering of money on physical improvements, supposed to be permanent, yet permit them to continue in their present state so long. Chimneys have been built into nearly every building, yet there is but one that is not a serious hazard to fire and life.
>
> Mice, pack rats, and gophers infest and run rampant through the buildings. I have seen a gopher with her litter sitting on the apparently solid stone walls, disappear through the wall. Smoke exudes through another stone wall, and a stream of water turned into another, apparently solid, continued to flow. Previous to the past season the stones of the exterior walls were set in place without being bedded in mortar, and were backed with a thin layer of concrete, mixed by incompetents, and not bonded to stonework with reinforcing. Rot, rust, and decay go unchecked. The electric substation, through which several thousand volts of electricity flow, is a serious hazard to life, as are the third floor sleeping quarters in two of the dormitories. Hundreds of meals are served each day; workmen, professional men, college professors, eat at the public messhall, where there is no refrigeration for food, and the meals are prepared in an antiquated kitchen. The dormitories are equipped with insanitary wood troughs to wash in, and there are still several very insanitary shower baths. The temporary employees residence area, commonly known as "Scabtown"--not an entirely inappropriate name for the area--is a disgrace to the park and the Government.
>
> Although not entirely self-liquidating, there is no place where the Government could spend money to greater advantage than in rehabilitating the physical improvements in this park. Not only would it be a boone to the many employees, but also to the many hundreds of thousands of citizens who will visit the park in the future.[13]

Because of inadequate appropriations snow removal operations were not attempted during the winter of 1934-35, resulting in the park opening five weeks later than during the previous several years. In April snow removal commenced at which time a rotary Snogo and two bulldozers were used to clear the heavily-packed snow (13 feet at Park Headquarters). Visitors made their first trip over a two-way road to the lake rim on June 1. Once the snow was removed major road patching on the south and west entrance roads was undertaken.[14]

Crater Lake was kept open on a year-round basis for the first time in 1935-36. The acquisition of an additional high-powered rotary snow plow facilitated the task of maintaining open roads in the face of heavy winter storms, leaving a total snowfall of nearly fifty feet. Bulldozers were used to cut through the frozen drifts on Rim Road. Cooperation from the Oregon State Highway Commission for snow removal on approach roads was an important factor in the winter accessibility of the park.[15]

In 1937 Superintendent Canfield reported on the merits of snow removal and its relation to winter accessibility of the park. Among his observations were:

> The value of winter accessibility of Crater Lake National Park was again shown during the 1936-37 season when open entrance highways were maintained from Klamath Falls on U.S. Highway 97 and Medford on U.S. Highway 99--both gateway cities. Approximately 23 miles of park highways were involved. The Oregon State Highway Department maintained open roads to the park boundaries in cooperation with the National Park Service.
>
> Up until the acquisition of powerful snowplow equipment, the wonders of Crater Lake during winter months were viewed only by the eyes of persons who skied or snowshoed over 20 to 25 miles of snow. The park was practically inaccessible from November until late June or July 1. Snow was removed entirely by hand labor, making only a one-way traffic lane possible. The one-way traffic would persist until after the middle of July. It is of important interest to note that nearly 50,000 visitors arrived in the park during the time travel had been impossible in previous years.[16]

World War II had a significant impact on park operations and maintenance activities. In 1942 the park turned over to the armed forces on a loan basis its fleet of trucks and snow removal equipment. The loan consisted of nine pickup and dump trucks, one Snogo 1929 model, one Snogo 1936 model, and one Rotoblade snow removal machine. The loan of this machinery, together with reductions in park personnel, appropriations, and visitation, resulted in closure of the park in November 1942. The park would be open on a summer basis only until year-round operations were resumed in 1946.[17]

The reduction of park personnel during the war resulted in the decimation of experienced maintenance crews. Hence the chief ranger and the park naturalist undertook the major responsibility for road and trail repairs and other essential summer maintenance work. They furnished crews or individual employees to assist the park carpenter, plumber, road foreman, and engineer in their various duties. This cooperation by the more experienced and trained park personnel was important to the ongoing maintenance operations of the park during the war. According to Superintendent Leavitt, "the only unskilled labor we were able to procure was a few young boys just old enough to qualify under the age regulations, and a few old men."[18]

One of the problems that resulted from the winter closure of the park during the war was increased road and building damage occasioned by heavy snow. The park was manned by skeleton winter crews, and snow was not removed from roads or buildings. Thus, the condition of park roads, buildings, and facilities deteriorated as the war continued. Damage to park buildings became a problem of particular concern to Crater Lake administrators, evidence of which may be found in a memorandum prepared by Leavitt for NPS Director Drury on July 21, 1943:

> The building that has sustained the greatest amount of damage is the ranger club. The heavy load of snow on the roof brought about stresses and strains in the framework of the building, which resulted in reopening and widening many of the old cracks that existed in the plaster in this building, and in addition caused buckling and sagging of the plaster on the ceilings of a number of the rooms to such an extent that it is about ready to fall. The cracked and buckled plaster on the side walls is much more likely to remain in place.
>
> Cracks in the plaster on the walls and ceilings in the Superintendent's residence and other employees' quarters where plaster has been used were found. Some of this was recracking or widening of old cracks that have been sealed or painted over, and in addition there were many new cracks found.
>
> The administration building which is one of the newest buildings and more soundly constructed of heavier material, seems to have come through the winter in good shape, as has also the quarters of the Assistant Superintendent.

> There is little or nothing that can be done to avoid this damage in future winters when the park is closed. In past winters a spike camp of CCC boys has been kept at Crater Lake during the winter months to remove at least a part of the heavy snow load on these weaker buildings, and thus prevent excessive damage.
>
> As far as could be ascertained from inspection of the rooms, there has been no breaking or splitting of rafters or studs or other parts of the frame of the building, but it is conceivable that over a period of years these stresses and strains due to heavy snow load may finally result in breakage that may be really serious. . . .
>
> A portion of the porch of the old community house at the rim was crushed by the snow, and all of the roofs of the buildings show the effect of a heavy winter. Sliding snow has scoured the green stained shakes or shingles practically white, and the overhung eaves of some buildings show the effects of winter storms and the tremendous crushing effect of settling snow.
>
> Evidently there were some very heavy windstorms during the winter, for window and door shutters and storm barricades have been ripped off to a greater extent than usual. This was particularly noticeable at the Crater Lake Lodge at the rim. The steel fire escape ladder on the north side of the building had been crushed down about 18 inches and the siderails telescoped on itself.[19]

When the park reopened on a year-round basis in July 1946 prewar maintenance activities and standards were gradually reestablished as funding and personnel permitted. The most immediate maintenance needs were addressed during the summer of 1946. The trail to the lake was opened to the public on August 4. The maintenance crews encountered many difficulties in opening the trail, including heavy snow drifts, rock slides, and washouts. The major roads in the park were patched with crushed rock and oil, the crushed rock being obtained from the summit of Dutton Ridge. By late summer the roads, according to Leavitt, were in "fairly good condition" with the exception of the west and south entrance roads where the outer edge of the pavement was "continually breaking because of lack of metal underneath the paving."

Snow-related maintenance activities continued to comprise a large portion of park operations during the postwar years. The months of October and November 1946 witnessed extreme cold and heavy snowfall. The early winter weather conditions resulted in a variety of maintenance, snow removal repair activities as reported by Superintendent Leavitt:

> . . . As usual, visitors got caught in the early storms and had to be helped out when their cars became stalled or skidded off the road. It was necessary to widen and improve the detour around the Annie Spring section to provide room for the operation of the big, heavy snow plows. Snow poles had to be erected all along the roads from the southwest and to the Rim of Crater Lake. Snow sheds had to be installed at Park headquarters and to the entrance-way of every building that is used or occupied during the winter. These include not only quarters, mess hall, dormitories, etc., but also comfort stations at the Rim and at Park headquarters. The temporary ranger station used on the Rim during the winter months in pre-war time and which was moved to a point about midway between the South Entrance and Annie Spring for an emergency ski patrol cabin, was moved back to the Rim and placed in readiness for service during the winter. . . .
>
> The extended and heavy storm from the 16th through the 29th required the services of all personnel to keep the highways open and utilities operating. The 1936 3-auger Sno-Go broke down early in the storm and this threw an added burden on the old 2-auger 1929 model Sno-Go, as well as the operators. In spite of the extraordinarily heavy snow fall, part of the time with an admixture of rain which created slush out of the packed snow on the highways, the roads were never closed, although travel was discouraged. The 3-auger Sno-Go was still in the shop awaiting parts for repairs at the end of the month.
>
> The heavy snow fall throughout the Park, coupled with a "silver thaw" in the lower elevation, snapped power and telephone lines promiscuously. Electric power service was off for three days with breaks from one end of the transmission line to the other, while both the Chiloquin and Ft. Klamath telephone lines were still out at the end of the month, due to numerous breaks. Telephone service between Park headquarters and Annie Spring, however, was restored, so employees in[20] that area could keep in touch with Park headquarters.

During the postwar years maintenance standards, personnel, and park appropriations were gradually restored to their prewar levels. Because little maintenance or repair had been accomplished during the war, the condition of park roads, buildings, and facilities were greatly in need of rehabilitation during the postwar period while funding and personnel levels were slowly increasing. Thus park management was confronted with a backlog of maintenance and repair needs that it could not meet for several years. In July 1948, for instance, Superintendent Leavitt reported:

> Loss through decay of the Goodbye Creek Bridge, Annie Creek Bridge, and closing of Rim Road at Anderson Bluff through slide, seriously handicaps safe and satisfactory travel; detours at these points are dangerous and at the Goodbye Bridge detour many accidents have occurred, especially during the winter time. The main, public campground at the Rim is in deplorable condition; too small, no room for trailers, inefficiently laid out, covered by snow till middle of July; Annie Spring campground development never completed; comfort station only modern feature; existing campground should be improved and new ones developed; South and West Entrance roads badly need seal coating job; should be rebuilt; buildings, constructed for summer use only, used on year-round basis; are unsatisfactory and inefficient, expensive to maintain and operate; utilities generally need rehabilitation.
>
> Good results have been obtained in every park activity within the funds that have been made available for personnel, supplies, and equipment, which, in general, are too limited. Economy-minded Congress, whose purpose is to reduce and close out war-born expansion or new bureaus, works hardship on the National Park Service, which reached an all-time low during the war and now must expand to give proper protection to areas and provide for tremendous increase in travel. There has been no new construction in the park since before the war.[21]

Snow removal continued to be a major expenditure of the park's operating budget during the early 1950s. In 1952 NPS Director Conrad L. Wirth pointed out that snow removal placed "abnormal demands for maintenance and abnormal maintenance costs" on the park's operating budget. He observed, "about $400,000, or 10 percent of maintenance funds, is spent annually to remove snow, with no permanent benefit to road conditions. Less than 4 percent is spent for professional services."[22]

As park management rebuilt its staff and organizational structure in the postwar years maintenance operations were placed under the engineering division for administrative purposes. An organization chart prepared in June 1955 indicated that maintenance activities were assigned to the engineering division headed by Park Engineer William N. Loftis, Jr. The functions of the division were:

> Programs and supervises all work required to maintain and operate the physical plant, including all essential utilities, garage and repair shop for maintenance of motorized and mechanical equipment, general building and grounds maintenance and road and trail maintenance. Is in part responsible for the planning, design, specifications and construction of all physical facilities. Makes preliminary engineering field studies for needs of additional physical facilities. Prepares and reviews specifications for purchasing regular and heavy duty machines and equipment. Prepares fiscal estimates and operating budgets.

The division had five sections under various chiefs: communications and power (electrician); roads and trails (mixed gang foreman); garage and shop (mechanic); water-sewage-sanitation (plumber); and carpentry-painting.[23]

By 1962 park maintenance activities had been assigned to a "maintenance and operation of physical facilities" division. The new division was headed by the park engineer and had three sections each directed by a foreman: buildings and utilities, roads and trails, and garage and shop.[24]

By the 1970s a maintenance division had been established in the park organizational structure. The division was headed by a maintenance general foreman. The three primary foci of the division's activities were buildings, grounds, and roads and trails. Building maintenance included a wide range of efforts from minor repairs, routine painting, and refinishing of floors to major structural rehabilitation and improvements to electrical, sewer, and heating systems. Grounds maintenance included campground and roadside cleanup, tree planting and rim area landscaping. Roads and trails maintenance included snow removal, resurfacing, repairs, and clearing of debris and rocks. Park maintenance crews were aided by Youth Conservation Corps personnel in road, trail, and building rehabilitation and campground cleanup.[25]

During recent years the Crater Lake staff has sought to professionalize its maintenance operations. Such efforts have been made to bring park maintenance programs into compliance with the servicewide initiative for maintenance management systems.

ENDNOTES

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3. Annual Report of the Director of the National Park Service, 1922, pp. 127-28.

4. Annual Report of the Director of the National Park Service, 1923, pp. 143.

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6. Annual Report of the Director of the National Park Service, 1925, pp. 103-04.

7. Annual Report of the Director of the National Park Service, 1927, p. 11.

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9. Annual Report of the Director of the National Park Service, 1930, pp. 84-86.

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12. Annual Report, Crater Lake National Park, 1934, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendents Annual Report.

13. Survey for the Rehabilitation of Buildings in Crater Lake National Park, by E.E. Etherton, Superintendent of Construction, January 31, 1935, RG 79, 67A616, Box 5, File No. 614-01, Rehabilitation of Buildings - Survey.

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15. Annual Report, Crater Lake National Park, 1936, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendents Annual Report.

16. Annual Report, Crater Lake National Park, 1937, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendents Annual Report.

17. Leavitt to Franklin, June 16, 1946, RG 79, Central Classified Files, 1907-49, Crater Lake, File No. 0-1, Liaison Office.

18. Annual Report, Crater Lake National Park, 1943, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendents Annual Report.

19. Memorandum for the Director, E.P. Leavitt, Superintendent, July 21, 1953, RG 79, Central Classified Files, 1907-49, File No. 630-02.2.

20. Superintendent's Monthly Reports, September, October, November, 1946, RG 79, Central Files, 1933-49, File No. 207-02.3, Crater Lake, Superintendent's Monthly Narrative Reports, 1943-46.

21. Annual Report, Crater Lake National Park, 1948, RG 79, Central Files, File No. 207-001.2, Directors Annual Report, National Parks, Crater Lake. For more information on the condition of the water supply, sewage, garbage disposal, and sanitation systems in the park during the postwar years see "Report of Sanitary Inspections at Crater Lake National Park, Oregon," by A.L. Dopmeyer, Sanitary Engineer Director, U.S. Public Health Service, September 1947, RG 79, Central Files, 1933-49, File No. 900-05.1, Wages and Hours, Crater Lake.

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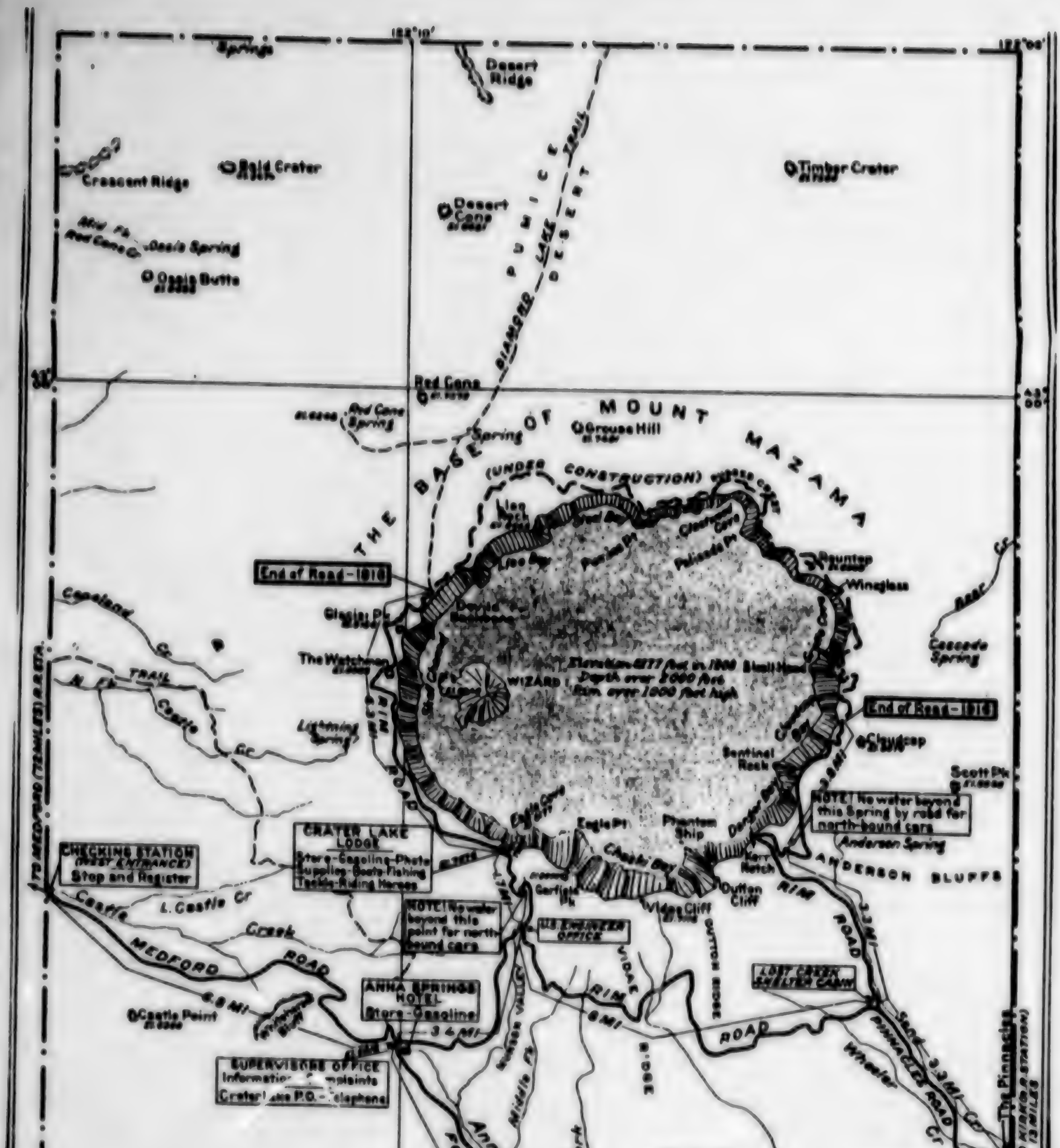
CHAPTER FIFTEEN

VISITATION AND CONCESSIONS OPERATIONS IN CRATER LAKE NATIONAL PARK: 1916-PRESENT

As one of the "jewels" of the embryonic National Park System, Crater Lake National Park became the focus of Park Service publicity efforts to promote visitation. In 1917 the bureau issued an automobile guide map (a copy of which may be seen on the following page) for the park. The map showed automobile highways leading to the park as well as the park road system, visitor accommodations, trails, and points of interest.

At the behest of NPS Director Mather, the Crater Lake publicity effort was supported by the Southern Pacific Railroad and the National Parks Highway Association. The railroad promoted travel to Yosemite, Sequoia, Lassen Volcanic, and Crater Lake national parks with various excursion fare offers. As a result of negotiations between Mather and the railroad, tickets between Portland and California points during 1917 entitled purchasers to stop over at Medford for a trip to Crater Lake. If a traveler entered the park via one gateway and left by another, his ticket was honored for continuation to his destination. Hence it was possible to go to the park from Klamath Falls and exit out the western gateway to Medford in connection with a trip to Portland. On the other hand, a party bound for California was permitted to stop at Medford, go through the park, and connect again with the Southern Pacific Railroad lines at Klamath Falls.

The National Parks Highway Association, with headquarters in Spokane, assumed leadership in designating a park-to-park highway connecting the major national parks in the West. During the spring of 1917, the association mapped and sign-posted a route from its terminus of the previous year in Mount Rainier National Park to Crater Lake, thus connecting Yellowstone, Glacier, Mount Rainier, and Crater Lake national parks by what was known as the National Parks Highway.



MAP OF CRATER LAKE NATIONAL PARK

In addition to these efforts, the National Park Service continued the practice of the Department of the Interior in publishing annual general information circulars for the parks. The 1917 circular for Crater Lake not only described the park's scenery and resources in glowing terms but also its visitor accommodations, transportation facilities, and means of reaching the park. The circular described the lake as an "unforgettable spectacle":

> Crater Lake is one of the most beautiful spots in America. The gray lava rim is remarkably sculptured. The water is wonderfully blue, a lovely turquoise along the edges, and in the deep parts, seen from above, extremely dark. The contrast on a sunny day between the unreal, fairylike rim across the lake and the fantastic sculptures at one's feet, and in the lake between, the myriad gradations from faintest turquoise to deepest Prussian blue, dwells long in the memory.
>
> Unforgettable also are the twisted and contorted lava formations of the inner rim. A boat ride along the edge of the lake reveals these in a thousand changes. At one point near shore a mass of curiously carved lava is called the Phantom Ship because, seen at a distance, it suggests a ship under full sail. The illusion at dusk or by moonlight is striking. In certain slants of light the Phantom Ship suddenly disappears--a phantom, indeed.
>
> Another experience full of interest is a visit to Wizard Island. One can climb its sides and descend into its little crater.
>
> The somewhat mysterious beauty of this most remarkable lake is by no means the only charm of the Crater Lake National Park. The surrounding cliffs present some of the most striking pictures of the entire western country. These can best be studied from a boat on the lake, but the walk around the rim of the lake is one of the most wonderful experiences possible.

The circular provided considerable information on the services and accommodations provided by the Crater Lake Company, which had agreed to a revised five-year concession contract with the Department of the Interior effective January 1, 1917. The company operated daily automobile service between Medford (83 miles from the park) and Klamath Falls (62 miles from the park) and Crater Lake. Automobiles left the Hotels Medford and Nash in Medford each morning, stopped for lunch at

Prospect, and reached the lake in the evening. Returning automobiles left Crater Lake each morning, reaching Medford in time to connect with outgoing evening trains. Automobiles left the White Pelican Hotel in Klamath Falls each morning and arrived at the lake at noon. Returning automobiles left the lake after lunch and reached the White Pelican Hotel in time for supper. The rates for these automobile services were:

Medford to Crater Lake and return	$15.00
One way (either direction)	
Klamath Falls to Crater Lake and return	8.50
One way (either direction)	
Medford to Crater Lake, thence to Klamath Falls, or vice versa	15.00

The circular described the hotel and camps operated by the Crater Lake Company in the park. These accommodations, along with the rates charged for such services, were:

> Crater Lake Lodge, on the rim of the lake, is of stone and frame construction and contains 64 sleeping rooms, with ample bathing facilities as well as fire protection. Tents are provided at the lodge as sleeping quarters for those who prefer them, meals being taken at the lodge.
>
> At Anna Spring Camp, 5 miles below the rim of Crater Lake, the company maintains a camp for the accommodation of guests, a general store (with branch at Crater Lake Lodge) for the sale of provisions and campers' supplies, and a livery barn.
>
> The authorized rates are as follows:

Rates at Crater Lake Lodge

Board and lodging (lodging in tents), one person:		
Per day		$ 3.25
Per week		17.50
Board and lodging, two or more persons in one tent:		
Per day	each	3.00
Per week	each	15.00
Lodging in tents:		
One person, per night		1.00
Two or more persons in one tent, per night	each	.75
Board and lodging (lodging in hotel), one person:		
Per day		3.75
Per week		20.00
Board and lodging, two or more persons in one room:		
Per day	each	3.50
Per week	each	17.50
Lodging in hotel:		
One person, per night		1.50
Two or more persons in one room, per night	each	1.25
In hotel rooms, with hot and cold water:		
Board and lodging, one person		
Per day		4.25
Per week		22.50
Board and lodging, two or more persons in room		
Per day	each	4.00
Per week	each	20.00
Lodging		
One person, per night		2.00
Two or more persons in one room, per night	each	1.75
Baths (extra)		.50
Fires in rooms (extra)		.25
Single meals		1.00

Rates at Anna Spring tent camp

Board and lodging, each person:	
Per day	2.50
Per week	15.00
Meals:	
Breakfast or lunch	.50
Dinner	.75
Children under 10 years, half rates at lodge or camp	

The Crater Lake Company operated a general store at Anna Spring Camp and a branch store at Crater Lake Lodge. The stores sold provisions, tourists' supplies, gasoline, motor oil, hay and grain, fishing gear, drugs, Kodak film supplies, and bakers' goods.

While visitors were permitted to provide their own transportation and to camp in the park, subject to regulations, the Crater Lake Company operated in-park concession automobile, saddle horse, and stage transportation services. Fares and rates for these services were:

AUTOMOBILE

Fare between Anna Spring Camp and Crater Lake Lodge:	
One way	$0.50
Round trip	1.00
Transportation, per mile, within the park	.10
Special trips will be made when parties of four or more are made up, as follows:	
To Anna Creek Canyon, including Dewie Canyon and Garden of the Gods, 24-mile trip, for each person	2.00
To Cloud Cap, including Kerr Notch, Sentinel Rock, and Red Cloud Cliff and Pinnacles, 40-mile trip, for each person	3.00
The Sunset Drive, from Crater Lake Lodge to summit of road at Watchman, at sunset, 10-mile trip, for each person	1.00

HORSE

Saddle horses, pack animals, and burros (when furnished):	
Per hour	0.50
Per day	3.00
Service of guide, with horse:	
Per hour	1.00
Per day	3.00

ON CRATER LAKE

Launch trip:	
Wizard Island and return, per person	.50
Around Wizard Island and Phantom Ship and return (about 15 miles), per person	2.00
Around the lake	2.50
Rowboats:	
Per hour	.50
Per day	2.50
With boat puller, per hour	1.00
With detachable motor	
Per hour	1.00
Per day	5.00

The circular also contained a section on the principal points of interest (a copy of which may be seen on the following page) in the park and nearby areas. Arrangements for trips to these points in the park could be made at the Crater Lake Lodge. For trips to Mount Thielson, Diamond Lake, and other remote points camp equipage, pack horses, and a guide could be secured at the lodge.[1]

PRINCIPAL POINTS OF INTEREST.

Distances from Crater Lake Lodge by road or trail to principal points.

Name.	Distance and general direction.	Elevation above sea level.	Best means of reaching.	Remarks.
	Miles.	*Feet.*		
Llao Rock	8 north	8,046	Auto to Glacier Peak, then on foot.	Fine view. Point from which Llao's body was thrown into lake. All-day trip. Pretty lake.
Diamond Lake	16 north		Horseback	Near view of Mount Thielsen.
Devil's Backbone.	6.5 north		Auto	Fine view of formation and coloring of Glacier Peak.
Glacier Peak	6 north	8,156	Auto and foot	Highest point on rim of lake; fine view.
The Watchman	5 north	8,025	do.	Fine view; easy climb.
Garfield Peak	1 east	8,060	Foot or horseback	Hard climb on foot. If taken on horseback distance is 6 miles. Fine view. Monster boulder, 100 feet high.
Dyar Rock	2 east	7,880	do.	Hard climb on foot. If taken by horseback distance is 6 miles.
Vidae Cliff	3 east	8,135	do.	Fine view. Easy trip by horse; distance 7 miles.
Sun Notch	7 east	7,115	Auto and on foot	Fine view of Phantom Ship. View of Vidae Falls. Walk 1 mile. Easy trail.
Dutton Cliff	9.5 east	8,150	do.	Fine view; 7.5 miles by auto, 2 miles on foot.
Sentinel Rock	15 east		Auto	Most comprehensive view from rim of lake.
Cloud Cap	20 east		do.	End of auto road. Fine drive. Good scenery.
Scott's Peak	22 east	8,938	Auto and on foot	2 miles by trail from end of road at Cloud Cap. Highest point in park.
The Pinnacles	15.5 southeast		Auto	Grotesque formations. Fine trip.
Garden of the Gods and Dewey Falls.	5		do.	Waterfalls, meadows, pinnacles, and pretty canyons.
Anna Creek Canyon.	10 to 13.5 south.		do.	Beautiful canyon, 200 to 400 feet deep.
Union Peak	10.5 southwest.	7,698	Auto and foot	4 miles by trail from road. Hard peak to climb. Good view.
Wizard Island	2.5 north	6,940	Foot and boat	Extinct volcano crater in summit. Trail to top.
Phantom Ship	3 east		do.	Grotesque rock, pinnacled island.

Despite these publicity efforts, visitation to Crater Lake declined in 1917, primarily because heavy snowfall in late spring delayed regular tourist travel by several months. After considerable "shoveling of snow" by Crater Lake Company employees, automobiles arrived at park headquarters on July 7 and at Crater Lake Lodge on July 18. The roads, however, were not in condition for regular travel until August 1. The number of visitors and automobiles that entered the park in 1916 and 1917 were:

	Visitors		Automobiles	
	1916	1917	1916	1917
East Entrance	859	1,174	193	293
West Entrance	9,571	5,368	1,293	1,234
South Entrance	1,835	5,103	1,163	1,229
	12,265	11,645	2,649	2,756

A total of 1,766 automobile and 15 motorcycle licenses were issued during 1917, and $4,433 in receipts were collected from vehicles entering the park.[2]

Among the visitors to the park during 1917 was a large group of members of the Knights of Pythias Order. On August 14 the group held initiation ceremonies in the crater of Wizard Island--a practice that had been commenced several years earlier.[3]

Weather continued to play a major role in determining the extent of park visitation. The light snowfall of only ten feet during the winter of 1917-18, combined with warm weather early in the spring, made it possible for automobiles to reach the lake by June 18, one month earlier than the preceding year. As a result visitation to Crater Lake increased to 13,231 in 1918. The numbers of visitors entering the park were:

Pinnacles Road	1,193
Fort Klamath Road	5,625
Medford Road	6,413
	13,231

The statistics relating to the means of transportation of the visitors were:

Crater Lake Stage	516
Automobiles	11,471
Wagons	1,022
Motorcycles	10
Mounted on Horse	185
On Foot	27
	13,231

The number of motor vehicles entering the park were:

Pinnacles Road	267
Fort Klamath Road	1,305
Medford Road	1,533
	3,105[4]

In 1919 visitation increased by more than 25 percent to 16,645, while the number of motor vehicles entering the park rose by some 50 percent to 4,637. Several delegations of visitors toured the park in 1919, thus showing the increasing popularity of the park. Among the visiting contingents were 66 members of the Massachusetts Forestry Association on July 28-30 and 17 members of the Travel Club of America on August 16-18. The most illustrious visit, however, occurred on August 11 when nearly 400 members of the National Editorial Association visited the park. Since the lodge could not accommodate all of these guests, the Ashland and Medford chambers of commerce furnished blankets and camping supplies and the park contributed tents for the convenience of the group.[5]

The 1919 general information circular advertised several new attractions in the park that were designed to enhance the visitor's experience. The public camp grounds on the rim west of the lodge had been enhanced, one of the principal improvements being the installation of a large tank and pumping equipment to furnish an ample water supply not only for drinking and cooking purposes but also for showers. Sightseeing opportunities had been improved by a

> splendid new trail from Crater Lake Lodge to the shore of the lake. . . . [It] has given pleasure and refreshment to thousands, and, as was expected, elderly people and visitors wholly unaccustomed to climbing availed themselves of the opportunity to make the delightful trip from the lodge to the edge of the lake, thence in motor boats around the lake to Wizard Island and the Phantom Ship, and to other points of interest. The new trails to Garfield Peak and the Watchman were also exceedingly popular during the past season. A trail to the summit of Union Peak was constructed last year.

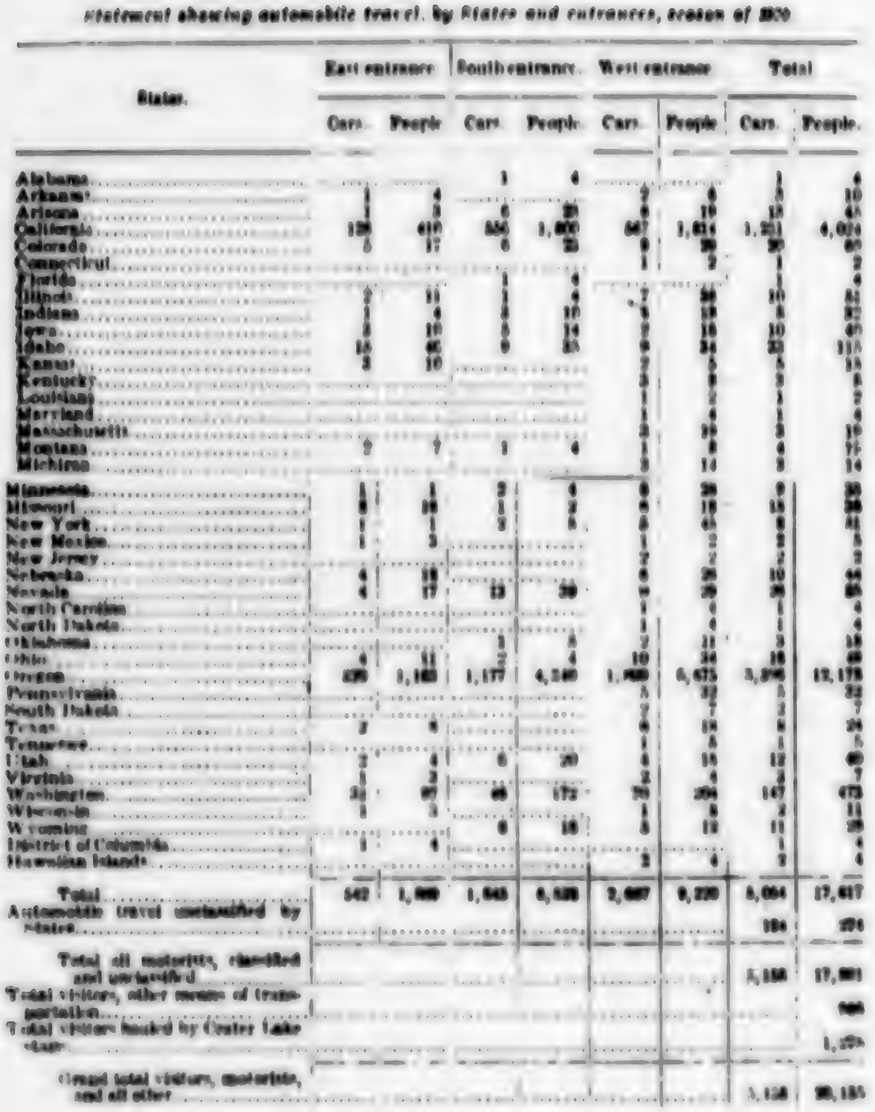
Five small launches, ten steel rowboats, and a 36-foot boat had been ordered by the Crater Lake Company to replace seven rowboats and a small launch that had been damaged in a storm the previous September. In addition to these boats that were available for rent by the hour or day, an expanded schedule of launch trips on the lake was provided:

Launch trips:	
Wizard Island and return, on regular schedule, launches leaving lake shore at 9 a.m., 11 a.m., 2 p.m., and 5 p.m., per person	.50
Wizard Island and return, special trip, per person	1.00
Around Wizard Island and Phantom Ship and return (about 15 miles), per person	2.00
Around the lake	2.50[6]

Visitation to Crater Lake increased by more than 20 percent in 1920 to 20,135. NPS Director Mather reported on the reasons behind this increase:

> Travel to Crater Lake Park has each year shown a healthy increase over the previous year, and again this season we have a most gratifying increase over last year, despite the gasoline shortage and other circumstances that threatened several times to discourage or curtail long tours by automobile. It was noted also that motorists were more inclined to stop over in the park, and camp with their own outfits longer, than it has heretofore been their custom to do. There certainly exists here a splendid opportunity for the development of interest in camping and fishing, but to get the very best results in encouraging this use of the park the Diamond Lake area should be added. With a road from Crater Lake to Diamond Lake the park would become at once one of the best recreation areas of the Pacific

Statement showing automobile travel, by States and entrances, season of 1920



Annual Report of the Director of the National Park Service, 1920, pp. 279-80. The year 1920 was the first in which a statistical breakdown of automobile travel by states and entrances was compiled.

> coast and would be patronized by motorists from Canada to Mexico.

Weather conditions again played a significant factor in the increased visitation. In this regard Superintendent Sparrow observed:

> After strenuous efforts, snow plowing and shoveling, the road to Anna Spring via the south entrance was opened for cars on June 13, and from the west entrance on the 17th. The road from Anna Spring to the lodge was passable for automobiles June 26, and the Rim Road around the lake on July 26. This is the earliest opening of roads within the park of which we have any record.[7]

A visit to the park during July 17-19, 1920, by members of the House Appropriations Committee, accompanied by NPS Director Mather and E.O. McCormick, vice president of the Southern Pacific Railroad, brought to a head a smoldering dispute between the Park Service and the Crater Lake Company. Although reservations for the visitors were booked in advance, the lodge was not prepared to adequately care for them. This led to considerable criticism, particularly from Mather who reprimanded Crater Lake President Parkhurst and threatened to cancel his concession contract. One of the causes of the dispute was attributed to the fact that the lodge "was not opened in time to get things in working order or the crew organized before tourists began to arrive in larger numbers than had been anticipated." The incident had a negative impact on park visitation, according to Superintendent Sparrow, because "in some manner the impression got out, about July 15, that this park was closed, and many intending visitors passed us by." Sparrow took the opportunity to elaborate on some longstanding problems park management had been having with the concessioner:

> During the early part of the season the service at the lodge came in for considerable criticism, most of which was justified. This was due, in part, to lack of preparation before the season opened, and inefficient organization, and lack of sufficient supplies. The lighting system was inadequate and the water system failed.

> After much fault finding and criticism passed along orally and through newspapers, conditions were very much improved and for the remainder of the season but few complaints were received. A Delco lighting plant was installed which gives satisfactory service. A new pumping plant was installed, which was guaranteed to do the work, but failed entirely, and another unit is now in transit and will be installed at an early date. During this time water was furnished the lodge from the Government plant, which proved adequate for all occasions, but sometimes required a night shift to keep up the supply. Too much of the lodge is used to house employees, and it is my opinion that tents or separate buildings should be provided for the help, and if this were done the lodge, with some tents, should be sufficient to care for guests for another season or two. . . . Regardless of what the plans are for the future, there must be some temporary arrangement made to take care of tourists during the 1921 season.
>
> The public operator has many good boats and launches on Crater Lake, but as yet there is absolutely nothing in the nature of a dock or boat landing. It is recommended that a loose-rock and concrete pier or boat landing be constructed for the convenience of tourists and protection of boats, which are always grounded on rocks when taking on or discharging passengers. . . .

Director Mather was so incensed by the problems with the lodge that he devoted considerable attention to the matter in his annual report for 1920. He described his personal dissatisfaction with the services being offered by the Crater Lake Company:

> Although this is the first year I have recorded the fact in print, the management of the Crater Lake Lodge and Anna Springs Camp has never been satisfactory to me. When I first visited the park in 1915 I found an attractively planned but unfinished hotel, especially far from complete within the structure, insufficient furnishings, a scanty larder, and very ordinary dining-room service. I observed that the plant was not being operated at a profit, and upon inquiry found that the owner had invested all of his available funds in the enterprise and was unable to secure more financial assistance.
>
> I endeavored to help him by offering suggestions regarding inexpensive improvements that would better service and make visitors to the hotel more comfortable, while further efforts were made to secure financial aid to complete the building. I secured the services of an experienced hotel operator, who

> visited the park and suggested perfectly feasible yet inexpensive betterments in kitchen and dining-room service. There were always promises of action on the suggestions and bits of advice, but no improvements worthy of the name were made. Year after year I visited the park, found the usual indifferent service and unfinished accommodations. I pleaded for improvement, got more promises, but never any fulfillment of agreements or understandings.
>
> Last year I visited the park with the National Editorial Association, and although the number of members of this party was well known months before, as well as the time they would spend at Crater Lake, the management was entirely unable to care for the party in a satisfactory manner. Again I remonstrated with the owner and got more promises, only to find absolutely no compliance a year later when, last July, I visited the park with the Appropriations Committee.
>
> Conditions this year were worse than last season; certainly no better in any respect. I concluded the time had come for action, and accordingly I gave the owner of the hotel property notice that recommendation would be made for the cancellation of his franchise, and that the park would only be kept open for motorists bringing in their own equipment. This had the effect of materially improving service for the remainder of the season, but I feel that a change in the operation of this enterprise must be made.

At Mather's request, Oregon Governor Benjamin W. Olcott appointed a nine-member commission in August 1920 to investigate the status of Crater Lake concessions and develop a "practicable plan" for securing improvements. The committee, consisting of businessmen from Portland and Southern Oregon towns, was given a mandate by the governor to take "care of the interests of the present hotel management" and devise "plans for placing the accommodations at the lake on a basis which will be satisfactory to the national park management and to the thousands of tourists who annually visit this natural wonder." It was Mather's hope that with the results of the study funds could be raised in Oregon to purchase the property of the Crater Lake Company and rehabilitate the enterprise, the "parties subscribing the funds to organize and operate in much the same way as similar groups are now organized for the development of the Yosemite and Mount Rainier properties."[8]

In September 1920 the Department of the Interior informed Parkhurst of its intention to have improvements made in the Crater Lake Company facilities. After listing a series of alleged violations of his contract, the department stated its desire to have Parkhurst answer each charge and propose remedial measures to correct each criticism. If his response were "not timely made" or was "not deemed sufficient to overcome these charges," a hearing would be held. If evidence demonstrated that the company had not fulfilled its contract obligations, its lease would be annulled and revoked.[9]

Meanwhile, the Crater Lake Committee appointed by Governor Olcott conducted its investigation under the direction of its chairman, Sydney B. Vincent. The committee investigated each of 26 charges which had been leveled against the company:

1. That the manager of the Crater Lake Hotel and Anna Springs Camp failed in the year 1919 and 1920 to furnish the guests with ample and proper food supplies.

2. That the Crater Lake management failed to furnish first-class accommodations to the traveling public.

3. That he failed to maintain and keep in good repair Crater Lake Lodge and other buildings in connection with the resort.

4. That the leasee failed to complete Crater Lake Lodge prior to 1915 and since that year.

5. That the windows of the hotel were not kept in proper adjustment.

6. That suitable and adequate toilet facilities were not provided.

7. That the toilet facilities existent were not properly cared for and were improperly arranged.

8. That sufficient porter and bell boy service was not provided.

9. That all of the bed rooms were not made available for the guests.

10. That proper and clean linen and bed coverings have not been provided.

11. That the bed rooms are not completely or well furnished.

12. That an adequate supply of water was not available at all times.

13. That a sufficient number of boats for the accommodation of the guests was not provided. That guests were not supplied with sufficient information regarding the use of such boats.

14. That the management of the resort was generally lax.

15. That at the time of the visit of the National Editorial Association in 1919 the visitors were compelled to sleep three and four in a room.

16. That fire escapes had not been provided.

17. That the lighting system obtaining at the hotel was wholly inadequate.

18. That the taxes due Klamath County by the leasee had not been paid for several years.

19. That the leasee is not and has not been able properly to finance his operations.

20. That fresh milk was not available for the use of guests.

21. That horses for the accommodation of tourists were not available.

22. That ice was not to be had at the Lodge during the summer season.

23. That the sale of souvenir, or Crater Lake novelties, was not pushed.

24. That visitors at the Lodge on and about the 4th of July of this year were not all served with meals.

25. That an existing outside fireplace was not properly sheltered from the wind.

26. That garage accommodations were not afforded the guests.

Regarding the accommodations and services provided by the Crater Lake Company, the committee noted that high costs, short seasons, and large crowds made it extremely difficult to bring park concession operations up to the standards desired by Parkhurst himself and others. The committee concluded its report with a sympathetic discussion of the plight facing Parkhurst:

> Your Committee has carefully considered all the phases of the situation coming within its knowledge, has read letters of endorsement of Mr. Parkhurst's treatment of his guests and of the general atmosphere at Crater Lake Lodge. Probably our greatest criticism may be directed against the toilet system which prevails at the hotel. We believe that Mr. Parkhurst had made a faithful and earnest effort to make Crater Lake Lodge a resort of merit and note and that he has in a measure met with success, as indicated by the increasing attendance at the resort since 1910. . . . We find that Mr. Parkhurst has received little or no cooperation from any source whatsoever, except banking accommodations. The National Park Service through the Superintendent of the Park has extended numerous small courtesies, but so far as we were able to ascertain the financial burden has been borne by Mr. Parkhurst alone.

it is the understanding of our committee that at other national parks the government has expended considerable sums of money in various ways, not only to improve park conditions, but to provide for the accommodation of guests at these resorts.

Your committee understands that the government has spent something over $100,000 for the installation of an electric lighting system in the Yosemite National Park, but has not spent anything for this, or other developments at Crater Lake Lodge.

In conclusion your committee begs to state that it is its opinion that there is room for great development at Crater Lake; that most of the complaints directed against Mr. Parkhurst might be attributed to the fact that he has not been properly financed and that were he afforded the necessary financial assistance Crater Lake Lodge would become one of the noted resorts of the country. Mr. Parkhurst has almost impoverished himself to keep Crater Lake Lodge going from year to year, making such improvements as his financial capacity would permit. He has invested a large sum of money and should he be retired as lessee, we believe he should be adequately reimbursed for his expenditures of time and money. Mr. Parkhurst is not a hotel man of the modern type, and we believe in some particulars the management has been lax, and that perhaps if satisfactory arrangements could be made for the buying out or other disposal of Mr. Parkhurst that Crater Lake Lodge properly financed might go ahead more rapidly under different management. We say this in all kindness realizing the tremendous burden that one man has had to carry without material help from any source. Mr. Parkhurst is entitled to great credit for what he has accomplished. In all kindness and respect to the Hon. Stephen Mather, your committee begs leave to express the opinion that Mr. Mather expected too much of Mr. Parkhurst under the conditions; also that Mr. Mather has been a little too harsh and abrupt in his handling of the situation. We realize the wonderful work that Mr. Mather has accomplished for the national parks of our country also that carrying the burden of so many national resorts, hampered as he probably is by some of the proverbial red tape of governmental operations, and that the embarrassment caused him by the inadequate toilet and lighting facilities, especially while the congressional party was at Crater Lake, magnified the shortcomings of Mr. Parkhurst's management and precipitated the condition which lead to the appointment of your committee. . . .

We believe it to be the duty of the people of Oregon, either to get behind Mr. Parkhurst financially and otherwise, or in lieu of that, have someone to organize a corporation which will buy out the existing corporation on a fair basis of return to the stockholders and to fairly compensate Mr. Parkhurst for the ten

> years of nerve racking toil which he has undergone. We also are of the opinion that the government, through Mr. Mather's department, should carry some of the burden of improving the Crater Lake situation, aside from the road work which the Forestry Department is doing.[10]

Through the efforts of Mather a conference of Oregon businessmen was held during the winter of 1920-21 to work out arrangements for the refinancing and reorganization of Crater Lake park concessions. In his annual report for 1921 Director Mather described at length the financial reorganization and subsequent improvement to concession accommodations and services:

> The outstanding achievement of the year in Crater Lake National Park was the improvement of hotel accommodations, transportation facilities, and miscellaneous service along progressive lines, thus solving the most serious and aggravating problem that has confronted me in this park since entering upon my present duties. This important accomplishment was brought about by the Crater Lake National Park Co., a new corporation formed and financed by several public-spirited citizens of Portland and other Oregon cities, headed by Mr. Eric V. Hauser. This new corporation leased the Crater Lake properties from the old Crater Lake Co., which originally built the lodge on the rim of the crater, and pioneered in the furnishing of other service, the lease to be effective until March 1, 1922, on or before which date the lessee company may exercise an option to purchase the properties as provided in the agreement of lease. It is confidently expected that the option will be exercised, and that under the new ownership and management the present policies of improvement and development will be continued.
>
> In the agreement of lease covering the change in management of the public utilities, it was provided that the sum of $20,000 was to be expended in the improvement of the properties, this fund to be regarded as a loan to the Crater Lake Co., secured by a first mortgage on its equipment and other personal property, and payable in three equal annual installments if the option to purchase is not exercised, but to be canceled if the option is exercised. The fund, of course, was to be expended by the new company. With this money the new management has completed the Crater Lake Lodge, improved the water and lighting systems, installed necessary sanitary fixtures, erected 30 tent houses or bungalow tents at the lodge and 10 at Anna Spring Camp near headquarters, procured and placed on the

> lake a launch with a capacity of 40 passengers; and in many other directions provided the means of rendering excellent service and meeting the public demand for proper accommodations in this park.

Mather concluded his remarks on the new concession arrangements by discussing its wide support by Oregon business interests. He noted:

> Considering the short season and other serious handicaps under which the new enterprise has been developed, the success that it has achieved has been most remarkable, and has been the subject of widespread favorable comment. The work accomplished has stimulated the pride of the State in the park as nothing else has done. The results of the season are bound to be far-reaching, and I feel very sure that when the properties are finally purchased by the new company, and more funds are needed for further development, additional capital will be freely offered in all sections of the State, thus bringing to the aid of the park the interest and energies of many more such able men as are now identified with this progressive work. Such a consummation would place Crater Lake Park in a position identical with Mount Rainier and Yosemite Parks, which are being improved with funds subscribed from all parts of Washington and California respectively, by business men who are intensely proud of the chief scenic areas of their States, and appreciate their value as playgrounds for the people.
>
> That the support of every section of the State might be gained in this project was anticipated by the organizers of the new company, who conferred with business men of southern Oregon and interested several prominent citizens. Some of these men are now officers and directors of the company and very active in its affairs. Mr. Eric V. Hauser, of Portland, is president of the new corporation; Mr. R.W. Price, of Portland, is the first vice president; Mr. V.H. Vawter, of Medford, is the second vice president and treasurer, and Mr. C.Y. Tengwald, of Medford, is the secretary.[11]

In April 1921 the lodge and other concession operations in the park were placed under the day-to-day management of E.E. Larimore, an experienced hotel manager on the Pacific Coast. The change of management had an immediate impact on lodge operations. On August 29 the Medford Mail Tribune described these changes in atmosphere and efficiency:

> In former years everyone was impressed by the natural beauties of Crater Lake, but after the first gasp, there was an awkward pause. It was like entering a beautiful residence, expecting to greet an old friend, but finding no one at home. There was no one at home at Crater Lake inside the lodge or out. After a few "Ohs" and "Ahs" and a leaving of cards, as it were, one was eager to get away.
>
> This year there is a decidedly homelike atmosphere at the lake. One feels it immediately upon entering the lodge. You are not greeted as if you were merely an animated five dollar bill, welcome solely as a contributor to household expenses, but as a human being on a pilgrimage of devotion. Will Steel, the father of Crater Lake, puts this over. He is behind the counter to greet you, not as another customer, but as another candidate for initiation into the Mystic Order of Crater Lake enthusiasts.
>
> Moreover the entire hotel staff is on its toes. They are all new and have the enthusiasm of fresh recruits. Not only is the table excellent, but the service combines beauty and efficiency to a remarkable degree.
>
> At night the guests gather around the fire like a large and happy family. There is music furnished by members of the hotel staff, and there is dancing entered into even by those who climbed Garfield Peak in the afternoon.
>
> Then Will Steel usually gives a little talk on Crater Lake, its history and formation, which is just what the visitors are eager to hear, and about ten o'clock everyone trots off to bed.
>
> It may be merely the difference between good hotel management and no hotel management at all. But there seems to be something more--the creation of atmosphere in it. This appears to be the supreme achievement of the Crater Lake management of 1921.[12]

Park visitation increased by more than 40 percent for a total of 28,617 in 1921 despite the late opening of park roads due to late spring snows. The increase was attributed in part to the concessioner arrangements as well as improvements to the three public campgrounds in the park. Water facilities were installed at the Rim Campground, and toilets were constructed in each of the campgrounds. Some 14,000 persons, or 50 percent of park visitors, used the campgrounds.[13]

The Scenic America Company, a Portland-based firm headed by Fred H. Kiser, opened a photographic studio west of the lodge on August 25, 1921. Prior to the erection of the stone building the studio had operated in a tent. Under the terms of its concession contract the company sold photographic souvenirs, post cards, oil enlargements, and camera supplies. According to Mather, the establishment of this studio brought "to the park permanently the genius and artistic influence" of a man "who knows the national park system as well as anybody in the Northwest, and who for many years has aided this bureau by supplying pictures, by lecturing, and by writing on the parks and other western mountain regions."[14]

In June 1922, just prior to the opening of the tourist season, the Crater Lake National Park Company formally acquired the concession facilities leased to them by the Parkhurst interests the previous year. The lodge was improved, and on July 11 construction was begun on an $80,000 eighty-room addition. Under a two-year subcontract to William T. Lee of Klamath Falls a fleet of six "powerful new seven-passenger [Packard] touring cars" was introduced to provide improved service between the park and Medford and Klamath Falls. A five-year subcontract was let to the Standard Oil Company of California to construct and operate a gasoline service station at Anna Spring, thus filling a long-felt need by the motoring public.[15]

To protect the investment of the new concessioner and to encourage the development of plans for further comprehensive improvements and extensions in accommodations for park visitors a new franchise was granted the Crater Lake National Park Company by the Department of the Interior. The contract, signed on December 7, 1922, but made retroactive to January 1, provided for a twenty-year arrangement to cover hotel, camp, transportation, and other visitor services. While the contract offered "inducements for progressive development of the Crater Lake properties," it also contained, according to NPS Director Mather, "reciprocal obligations on the part of the owner to keep abreast of the demand for increased facilities, in so far as this can be done with due regard to the short season, reasonable return on the investment, and similar considerations."[16]

The detailed provisions of the contract were designed to circumvent problems that had arisen with the former Crater Lake Company. Among other things the contract stated:

> Term of the lease to be for twenty years from January 1, 1922, authorizing the Company to establish, maintain and operate in Crater Lake National Park hotels, etc., for the accommodation and entertainment of tourists and others; to install and operate laundries and barber shops, Turkish baths, bath houses, swimming pools; provide facilities for skating, sleighing, skiing and other winter sports; establish and maintain hot houses and gardens; to sell newspapers and other articles of merchandise; also to establish, maintain and operate a transportation service; to maintain for use and hire, row boats on the lake; to conduct a general livery business; to establish and operate lodges; also to establish a dairy service and to operate general merchandise stores.

The new company was given the right to occupy certain portions of the park to maintain its facilities and operate them. All plans for construction were to be approved by the Secretary of the Interior. The company was authorized to use timber, stone, and other building materials taken from the park for construction purposes, establish electric light plants and telephone and telegraph service, and graze horses. Provision was made for the renewal of the contract for a period not to exceed twenty years. The company was allowed to earn annually 6 percent in the value of its physical investment in the park, the 6 percent to be in the nature of a priority and if not earned was to be cumulative. The company was required to submit a schedule of all charges above 50 cents for the approval of the Secretary of the Interior, who could make such modifications as he deemed necessary so long as they were consistent with a reasonable profit on the investment made by the company. Concession employees were required to wear an identification badge, and the Secretary of the Interior was authorized to declare any person unfit or objectionable for employment by the company.[17]

The publicity surrounding the new concessioner and provision of visitor services, together with the removal of snow and opening of park roads by late June, contributed to an increase of visitation of more than fifteen percent in 1922. All told some 31,119 visitors entered the park in 9,429 private automobiles. In addition 995 visitors entered the park via transportation company stages, and 897 entered by other means, thus making the total park visitation 33,011.[18]

NPS Director Mather reported on the increasing popularity of Crater Lake National Park in 1923. With obvious pride in his accomplishments in terms of improving visitor facilities and services he stated:

> Park facilities in every way equaled the unprecedented demands upon them. The tourist camps were enlarged early in the season, ample sanitary facilities installed, and additional water supply provided. The operators kept apace similarly, so that at no time were the hotel, transportation, or launch facilities jammed. Early in the season, as it became apparent that visitors preferred accommodations in view of the lake, the lodge management removed the tent houses from Anna Spring to the Rim and were thus able to take care of all demands for lodging. The only difficulty encountered in handling the greatly increased travel was a temporary shortage of water at the Rim, a crisis being avoided by installation of two additional 20,000-gallon storage tanks. . . .
>
> . . . public facilities are in excellent condition and balanced nicely against requirements. With a few exceptions, sanitary provisions and water supply are well ahead of demands, trails are adequate and well maintained, sufficient dockage is provided on the lake, and auto camp grounds are well distributed and were splendidly maintained all season. Firewood has been available in all camp grounds. A number of new signs designed to reduce speeding at critical points were put up and traffic so regulated that no one was injured throughout the entire season, only two minor collisions occurring.
>
> The reaction of visitors to the efforts of the park forces was beyond praise, nearly all being imbued with the finest possible spirit--that splendid spirit that tends to highest development among men and women who gather nightly around camp fires in the mountains.

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The visitor facilities and physical improvements alluded to by Mather included the construction of a large combination mess hall and bunk house at Lost Creek for the use of early park visitors entering from the east. A 70-foot log boat landing had been constructed at Wizard Island. Two new flush toilet facilities with lavatories and oil-burning water heaters for hot showers were constructed at each of the campgrounds at the rim and Anna Spring.

An upgraded publicity program for the park was also initiated in 1923. The Southern Pacific Railroad and the Crater Lake National Park Company led the campaign. Superintendent Sparrow contributed to the publicity initiatives by preparing articles for publication in four national periodicals and various newspapers.

The new visitor facilities and the publicity efforts contributed to making 1923 the highest visitation year in Crater Lake's history to date. The total number of visitors increased by some 57 percent to 52,017. The western entrance continued to be the most popular. A new record for the largest single day's visitation through an entrance was established on September 2 with 235 cars carrying 884 visitors entering the park via the western gateway. Visitors came from every state but two, and from such places as Hawaii, Switzerland, and the Netherlands. There was a notable increase of visitors from California, the "number of first entry cars from that State during July equaling first entries from Oregon itself."[19]

Visitation to Crater Lake increased by another 24 percent in 1924 to 64,312. This increase, according to Mather, was the result of four factors: an early opening; the park's location almost midway in the Pacific Coast chain of parks extending from Sequoia to Mount Rainier; the improvement of approach roads; and "increased publicity, largely spontaneous, given by lovers of this Cascade gem."

Improvements to visitor facilities by the Crater Lake National Park Company continued to lure visitors to the park. During 1924 the addition

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(north annex) to the lodge was completed on the exterior, and 22 of the 85 new rooms were completed and furnished. A new 40-passenger launch was placed in service on the lake, and a new boathouse was constructed on Wizard Island. In addition the Kiser studio added a small wing to provide a one-day film developing and printing service.[20]

During the summer of 1924 the Community House was completed at the Rim Campground. Funds for the structure had originally been intended for construction of a new home for the superintendent, but Thomson diverted the money toward the visitor activity structure. The Community House had a large rustic fireplace and was provided with a Victrola by the Medford "Craters," a booster organization dedicated to promoting park development. The structure became the setting for informal evening gatherings, lectures, dancing, and musical programs, the latter featuring the "Kentucky Rangers" quartet consisting of four seasonal park rangers from that state.[21]

Prior to the 1925 travel season, R.W. Price, who had become president of the Crater Lake National Park Company, began an advertising campaign for the park. The campaign, which took the form of an annual trip that he continued until 1941, consisted of visits to railroad passenger and tour agencies throughout the eastern United States. His annual tours took him from Chicago to Washington, D.C., north to Boston, west to Buffalo and Cleveland, and back to Chicago.[22]

Travel to Crater Lake increased slightly to 65,018 in 1925. Of this total, some 98 percent traveled in their private automobiles. For the first time in its history Crater Lake entertained guests from every state in the union, as well as several foreign countries. This travel increase was significant because the 1925 season was five weeks shorter than that of 1924 because of adverse weather conditions.

Only minor improvements were made to visitor facilities in 1925. These included the completion and furnishing of nine rooms in the lodge, thus bringing its total to 92, eight new rowboats, and a complete sewage-disposal plant.[23]

With the increasing visitation the National Park Service implemented an extensive road sign information program at Crater Lake during the mid-1920s. In 1925, for instance, the park information circular, stated:

> As fast as funds are available for that purpose the National Park Service is having standard signs placed along the roads and trails of this park for the information and guidance of the motorists and other visitors that use the park roads and trails.
>
> These signs, in general, consist of information signs, direction signs, elevation signs, and name signs, all of which are of rectangular shape and mounted horizontally; and milepost signs, rectangular in shape but mounted diagonally; all of which usually have dark-green background and white letters, or vice versa; and danger or cautionary signs, most of which are circular in shape and usually have red background and white letters; and comfort station, lavatory, and similar signs, triangular in shape, having dark-green background and white letters. These last signs are so mounted that when pointing downward they designate ladies' accommodations and when pointing upward they designate men's accommodations.
>
> The text on the standard road signs is in sufficiently large type to ordinarily permit their being read by a motorist when traveling at a suitable speed; however, as an additional safeguard, the motorist must always immediately slow down or stop or otherwise fully comply with the injunctions shown on the circular road cautionary signs.
>
> Because of lack of funds, it has not been possible to place cautionary signs at all hazardous places in the roads; therefore the motorist must always have his car under full control, keep to the right, and sound horn when on curves that are blind, and not exceed the speed limit, which is 20 miles per hour on straight, fairly level road and 12 miles per hour on curves, narrow, or steep descending sections of road.[24]

Visitation to Crater Lake continued its general upward trend from 1926 to 1931 with the exception of a slight decrease in 1927, the result of a shortened travel season because of some 51 feet of snow during the winter of 1927-28. During this six-year period visitation nearly doubled from 86,019 in 1926 to 170,284 in 1931, while the number of private automobiles entering the park more than doubled from 26,442 in 1926 to 56,189 in 1931. While the number of private automobiles entering the park increased, the number of persons entering by auto stage declined from 792 in 1926 to 535 in 1931.

Various factors contributed to this major increase in travel to the park. Road improvements both within and outside the park facilitated travel. In 1926 the Cascade line of the Shasta route of the Southern Pacific Railroad, connecting Eugene with Klamath Falls, was completed, thus bringing a rail terminal within about twenty miles of the park. That same year the Crater Lake National Park Company negotiated a fifteen-year contract with the Standard Oil Company to construct and operate a "stone-and-rustic" service station at the junction of Sand Creek and Anna Spring roads at Government Camp, thus providing a more centrally-located station for park visitors. Winter recreation opportunities in the park began receiving attention in 1927 with the commencement of the first annual ski race from Fort Klamath to Crater Lake Lodge and return sponsored by the Fort Klamath Community Club on February 22. Thereafter the ski race and accompanying winter carnival became an annual event, generating considerable interest in winter sports in the park and increasing pressures to keep park roads to the rim open as long as possible during the winter to afford tourists the opportunity of viewing the "beautiful and inspiring spectacle" of the lake in its "winter garb."[25]

The growth of park visitation was encouraged by the continuing development of improved visitor facilities in the rim area. In 1927 Park Service officials and representatives of the Crater Lake National Park Company and the Bureau of Public Roads developed a plan for rim area development. The plan provided that the concessionaire would construct and operate in the next year a cafeteria with a connecting general store for the sale of camping supplies and a group of rental cabins in the campground area away from the rim edge. Other improvements scheduled were an asphalt trail along the edge of the rim the full length of the village area; restoration of the soil between this promenade and the revetment to natural grasses and wildflowers; and construction of a wide parking area alongside a thirty-foot dustless road.

During 1928 the rim area was vastly improved. It was opened at the west boundary by the completion of a new road emerging at the rim edge. From there a new oiled drive led to the new cafeteria/general store and cabin group, campground, and lodge at the opposite end of a half-mile plaza. On each side of the boulevard an 18-foot parking strip was provided for several hundred automobiles. Along the edge of the rim a wide asphalt promenade was built for pedestrians and between this and the log parapet limited parking along the boulevard was an area of varying width graded for plant restoration. The group of fifteen housekeeping cabins was opened on July 15, and the new cafeteria/general store on July 20. A new Crater Wall trail was constructed from the west end of the Rim Campground to the lake "on high standards to permit the use of saddle animals, enabling many thousands to enjoy the lake who were heretofore denied that pleasure by physical incapacity." The trail was opened on July 6 with Secretary of the Interior Ray L. Wilbur leading the first party ever to descend to the lake on horseback. That same year the company added a veranda on the lake side of the lodge, introduced a 35-passenger launch on the lake, and made saddle horses available for rental.[26]

As a result of the rim area development in the 1920s park visitor facilities and accommodations became centered in what was referred to as Rim Village. A Park Service circular for 1930 described the physical development of the village:

> A large majority of visitors first reach the rim of the lake at the Rim Village. This is the main focal point of park activities, containing the lodge, post office, cafeteria, general store, studios, a rental cabin group, auto service, emergency mechanical services, ranger station, etc. From the Rim Village a number of the most important trails take off, including the spectacular new trail, just completed, down the crater wall to the lake shore, where launches and rowboats are available for pleasure trips and fishing excursions. This fine trail is 6 feet wide and on a holding grade of 12 per cent, permitting its use by people unaccustomed to much physical effort. For those who prefer not to walk, saddle horses and saddle mules are available for this and other trail trips. The trail to the summit of Garfield Park, directly overlooking the lake and giving a

> magnificent panorama of the Cascades, also takes off from the Rim Village, as does the trail to the Watchman, and another trail to Anna Spring.
>
> A fine free camp ground, equipped with hot and cold shower baths and modern sanitation, is located here on the rim; its community house, comfortable with fireplace and with a small dance floor, is the center of evening recreation. A near-by cafeteria and general store cares for campers as well as for users of the rental cabins which are grouped near by.[27]

The introduction of modern snow removal equipment in the park during the winter of 1929-30 aided the increasing park visitation. In 1930, for instance, the equipment permitted opening of the park on April 14, the earliest date for travel to be checked in the park's history. The new removal equipment allowed the park to publicize its intention to keep the park open until December, thus affording visitors the opportunity to view the lake throughout the fall season.[28]

The Crater Lake campgrounds became increasingly popular attractions for park visitors during the late 1920s. In 1927, for instance, Superintendent Thomson reported that 70 percent of the park visitors "took care of themselves in one or more of the ten campgrounds." The Rim Campground was the most popular, an average of 300 people using it each night.[29] By 1930 the number of visitors using the three principal park campgrounds were:

Rim	5,129	14,373
Anna Spring	568	1,829
Lost Creek	240	739
	5,937	16,941

In addition a number of visitors used less structured camping places along the roads at White Horse, Cold Springs, and Sun Creek.[30]

Since the mid-1920s medical problems involving visitors and park employees had been referred to Dr. R.E. Green in Medford. With the increase in park visitation, however, it became imperative that a doctor and nurse be stationed in the park during the travel season. Accordingly, a three-year contract was awarded in 1930 to Dr. Fred N. Miller, head of the medical service at the University of Oregon at Eugene, to provide such services at Government Camp from June 15 to September 15 each season.[31]

During 1931 various new visitor facilities and services were introduced that served as further inducements to park travel. These included the introduction of naturalist-conducted boat trips on the lake and automobile caravan tours, launching of a new boat on the lake, construction of twenty new tourist cabins near the cafeteria and new docks at the bottom of the lake trail, location of a new organized campground at White Horse Creek, dedication of the Sinnott Memorial, and development of new trails to Garfield Peak and on Wizard Island.[32]

After more than eight years of operation in the park the Kiser Studio was closed when its concession contract expired on December 31, 1929. As a result of financial difficulties and increasing competition for the photographic souvenir market by the Crater Lake National Park Company, the studio was operated during 1929 by the stockholders of Kiser's, Incorporated, the successor of the Scenic America Company. Although Fred H. Kiser and the Bear Film Company applied for a new studio franchise in 1929, the Park Service did not issue a new permit, and the studio was converted into a visitor contact/information facility in 1930. That year the Crater Lake National Park Company opened a photographic studio in the general store/cafeteria building in addition to a small photo shop in the lodge.[33]

Visitation to Crater Lake slumped to 109,738 in 1932, a decrease of some 35.6 percent compared with the totals for the previous year. Travel by automobile stage totalled 302, a reduction of 42.5 percent from that of 1931. The five main park campgrounds (Rim, Annie Spring, Lost Creek, Cold Spring, and White Horse) were utilized by 11,324 visitors, a drop of 30.7 percent. The volume of business of the park concessioner was cut by approximately 50 percent, and the company's ledgers showed a net loss for the season's operations.

The reduced travel figures were attributed to various causes by Superintendent Solinsky, the chief of which was the national economic downturn. Cold and unusual weather played a significant role in the reduced travel figures. All snowfall records were broken during the winter of 1931-32 as an estimated 85 to 90 feet of snow fell at the rim, and early spring visitors found 20 feet of snow on the level at the rim. Large numbers of tourists from the Pacific Coast states, which traditionally provided the bulk of park visitors, were attracted to Los Angeles for the Olympic Games.[34]

Park visitation continued its downward slide to 96,512 in 1933, but then rebounded to 118,699 in 1934 as the nation's economic woes began to ease. The visitation increase in 1934 was attributed by Acting Superintendent Canfield in part to a "very light winter, the mildest on record since meteorological observations have been maintained throughout the year in the Park." The mild winter allowed access to the park by the public for eleven months compared with the previous maximum of eight. Because of the mild winter and extensive use of the park for winter sports by residents of nearby communities, a winter Ski Carnival was held near Government Camp on March 18, 1934. As a result of the success of this meet Canfield observed that "it is apparent that a great deal of pressure will be brought to bear to keep the Park regularly open for winter consideration." Public interest in keeping the park open in winter was encouraged by articles in national periodicals such as Canfield's "Crater Lake in Winter" published in American Forests in February 1934.[35]

With several exceptions park visitation continued a general upward trend from 1935 to 1941, primarily as a result of improvement in the national economy and year-round operation of the park beginning in the winter of 1935-36. The number of visitors nearly tripled during this period, rising from 107,701 in 1935 to 273,564 in 1941 with an average of some 225,000 during the four years before Pearl Harbor.[36]

Improvement of the national economy and its effects on Crater Lake visitation were apparent by 1935. In July Superintendent Canfield observed:

> Travel for the year covered in this report will probably not be up to previous estimates because of a comparatively early winter and a late opening in the spring. Once the roads were opened, travel approximated last year's, week by week; but there is an interesting development in that this spring it is apparent that there is a far greater demand for the higher priced accommodations. People are staying longer and spending more money than for several seasons.[37]

During the winter of 1935-36 the highways to the park from Medford and Klamath Falls were kept open, thus making the park accessible to motorists the entire year for the first time in Crater Lake history. Commenting on the year-round operation of the park and its impact on visitation Superintendent Canfield wrote in July 1936:

> This [travel increase] is not only due to an increased national park consciousness on the part of the traveling public and apparent improved economic conditions, but due to year around park accessibility. The latter fact is in direct contrast to short seasons, the result of snow blocked roads until late in the spring. Cooperation from the Oregon State Highway Commission in snow removal from approach roads was an important factor in the winter accessibility of the park. Discussions were begun by this office during the past year with the park public utilities operator with the object of formulating definite plans to ultimately offer limited accommodations for winter visitors. Hitherto, no food or lodging has been available, working an inconvenience on visitors. The nearest accommodations are over 20 miles distant. While it is not likely such services will be offered during the next winter, a step forward in the right direction has been realized. . . .
>
> . . . That this [year-round] development was appreciated, was shown by the arrival of many visitors during the snow-covered months to view Crater Lake in its scintillating raiment of winter finery. These visitors, to a large number, took an active interest in amateur winter sports, utilizing slopes for skiing, tobogganing and sleighing. The acquisition of an additional snow plow facilitated the difficult task of maintaining open roads in the face of winter storms, leaving a total snowfall of nearly 50 feet. No accidents marred the success of the winter season.

> As a result of the open roads, Crater Lake gained further favorable recognition from the public and press as a winter recreational area.[38]

The increasing winter visitation to Crater Lake continued to attract favorable comment from park management. In July 1937, for instance, Superintendent Canfield observed:

> The value of winter accessibility of Crater Lake National Park was again shown during the 1936-37 season when open entrance highways were maintained from Klamath Falls on U.S. Highway 97 and Medford on U.S. Highway 99--both gateway cities. Approximately 23 miles of park highways were involved. The Oregon State Highway Department maintained open roads to the park boundaries in cooperation with the National Park Service.
>
> Up until the acquisition of powerful snowplow equipment, the wonders of Crater Lake during winter months were viewed only by the eyes of persons who skiied or snowshoed over 20 to 23 miles of snow. The park was practically inaccessible from November until late June or July 1. Snow was removed entirely by hand labor, making only a one-way traffic lane possible. The one-way traffic would persist until after the middle of July. It is of important interest to note that nearly 50,000 visitors arrived in the park during the time travel had been impossible in previous years. This total speaks for itself.
>
> Through plowing activity and the urging of the superintendent, the Crater Lake Lodge was enabled to begin extensive interior improvements in May, opening for the public earlier than ever before. Hundreds of visitors took part in amateur snow sports in conjunction with drinking in the beauties of Crater Lake in its white raiment. While no ambitious snow carnivals were encouraged and the open roads were not given general publicity due to lack of accommodations, 39 different states were represented during the height of the winter, as well as a number of foreign countries.
>
> Travel for the year covered in this report not only represents a distinct gain over the preceeding year but set a new all time record of 180,382 visitors. A portion of this increase can be directly attributed to winter accessibility, which first became a definite fact in the 1935-36 season. A major share, of course, can be attributed to an increased national park consciousness and apparently improved economic conditions.
>
> Travel increases observed at Crater Lake were also on record in proportion in other national parks. All types of visitors

> were on the road. They kept the lodge, housekeeping cabins and cafeteria working almost to capacity, as well as keeping park camp grounds crowded. Both the park administration and the park operator are interestedly watching increased winter use of the park with an eye towards the availability of food and lodging accommodations.

The increasing visitation overtaxed the park campgrounds. Thus, preliminary work was undertaken in 1937 to double the size of the Rim Campground. Of particular concern to park management was the increasing number of house trailers that monopolized camp sites without actually using the stoves, fireplaces, and tables.[39]

The Crater Lake National Park Company made various improvements to its facilities and services in 1936-37 to meet the increasing demands of the growing park visitation. All rooms on the third floor of the lodge were completed, and ten uncompleted rooms on the second floor were finished in 1936. With the completion of the ten rooms the entire second floor was completed. In 1937 the lodge lobby underwent alterations, two 20-passenger buses were added to the stage fleet, and six new rowboats were placed on the lake. At the same time the inadequate heating system of the cafeteria was criticized by Park Service officials. The small housekeeping cabins were also characterized as being inadequate from the "standpoint of appearance," "poorly arranged," "disagreeable to occupy," and lacking "many other customary accommodations that are to be found in the better type of park operator's development."[40]

In July 1938 Ernest P. Leavitt, the new park superintendent, reported on the growing visitation to Crater Lake and its impact on park facilities. He observed that the "new all time record" of 204,725 visitors could be attributed

> to winter accessibility, snow conditions favorable to all classes of skiers, better publicity in regard to road and snow conditions in the park, and to the fact that the public could, for the first time, obtain meals in the park during the winter.

He went on to state that in spite

> of exceptionally heavy snowfall and prolonged storms in the Crater Lake area (the heaviest winter since 1932-33) the park was kept open for winter travel. Keeping the park open throughout the winter was justified in view of record winter travel and also because it made possible the beginning of summer operations much earlier than would otherwise have been possible. . . . It is also significant that having the park open made possible a considerable through-the-park travel, thereby saving many people the otherwise long and circuitous route in getting between points in the east and west side of the Cascade Mountains. . . .

During the period from December 1, 1937, to April 30, 1938, park personnel conducted a survey to determine why winter visitors came to the park. Of the 13,283 visitors entering the park during that period, 5,922 came for winter sports, while 5,825 were attracted by the scenic beauty of the lake. The remainder made use of park roads for travel between the Rogue River and Klamath valleys. Winter travel showed a wide geographic distribution, visitors coming from 32 states, one territory, and 5 foreign countries.

Aside from winter travel, the number of summer visitors was also increasing, thus crowding visitor facilities. During fiscal year 1938, for instance, peak visitor loads on the Fourth of July and Labor Day weekends crowded to capacity the accommodations afforded at the lodge, housekeeping cabins, cafeteria, and campground. On several other occasions throughout the summer all visitor facilities were crowded.

To keep pace with the rising tourism the Crater Lake National Park Company made improvements to its facilities. In 1938, for instance, various improvements were made to the housing arrangements in the lodge, including the elimination of fire hazards, expansion of launch and rowboat facilities, and installation of a laundry in the basement of the lodge.[41]

Winter use of Crater Lake National Park continued to increase during the late 1930s, thus prompting the Park Service to upgrade its public service, health, and safety standards during the winter months. These efforts, which had been commenced during the winter of 1937-38, were finalized during 1938-39. Thus in April 1939 Superintendent Leavitt reported that the past winter had been the first "where the standards of the National Park Service were met in connection with public service, public health, and public safety." In elaborating on this theme he observed:

> The increased cost to the government in the past two winters in the operation of Crater Lake National Park has not been due to demands of the public because these demands have been kept to a minimum. The increased costs have been necessitated by the Service's own standards of public service, health, and safety. By public service I mean keeping the roads in reasonably safe condition for winter travel by proper removal of snow, sanding bad areas to a limited extent, and by regular patrols to assist visitors who get into difficulties. Also providing adequate parking space for automobiles. Under the head of public service, we have for the first time this past winter provided modern comfort stations at the rim of Crater Lake and at Park Headquarters. These are electrically lighted and electrically heated and tunnel entrances were built between the plowed out roadway and the doorway to these comfort station buildings. The park never previously had such a service.
>
> Special precautions were taken at the rim of the lake to prevent visitors from slipping on the icy snow within the crater wall and being dashed to pieces on the slopes below. An accident of this kind occurred on Memorial Day two years ago in which a young girl lost her life. During the winter of 1937-38 a section of the rim area opposite the parking space was roped off. This was insufficient. During the past winter a rope was stretched from the Crater Lake Lodge to a point northward beyond the area ordinarily devoted to winter sports activities. Signs and flags were placed on this rope at regular intervals, the signs reading, "Danger, do not pass beyond this point".
>
> Crater Lake had more serious accidents this past winter than ever before due to novices trying ski trails that had been laid out for experts. We had both an expert trail and a novice trail properly signed, and one long trail leading from the rim of the lake to Annie Springs.
>
> The Park Service had to be prepared to handle these accidents when they occurred. It was, therefore, necessary to purchase

> two toboganns specially equipped for handling basket type stretchers in order to go to the assistance of injured visitors who were usually quite some distance from the road. It was necessary to buy several pairs of skis for the official use of our park rangers. Every member of our organization completed the Red Cross First Aid course and rendered very effective and efficient service whenever accidents occurred.
>
> In addition arrangements had to be made to see that a physician or surgeon was in the park on week ends of heavy travel and prepared to render service in the case of serious accidents. Arrangements were made with the Indian Service to provide necessary narcotics for hypodermics to be kept at the park for use of qualified physicians when necessary.
>
> By contracting our dining hall, visitors have been furnished with regular or short order meals during the past two winters at rates that were reasonable. The food was excellent in quality and well prepared and seasoned.
>
> As the dining hall houses the kitchen, dining room, and living quarters of the dining hall staff on the lower floor, and the park employees who do not have their families with them, on the upper floor, this building is kept serviced and heated 24 hours a day. Wash rooms and sanitary facilities were available for a much larger force than the park used. It was, therefore, easy to arrange the dormitory space on the second floor to accommodate 18 women, and on the third floor, to accommodate 24 men; thus the government, working through the dining hall operator, was able to furnish a cot and matress to overnight visitors at a charge of 25¢, the visitor providing his own bed roll. Over night accommodations were accepted up to the capacity of these dormitories, reservations being made by the dining hall operator in the order of receipt of application.

In addition a permit was granted to the Yellow Cab Company to operate up to five taxicabs in transporting visitors from Medford to the park during the winter.[42]

Winter sports programs in the park continued to be conducted in line with National Park Service policy, "special facilities and meets" not being provided or encouraged. During the winter of 1938-39, however, the Chiloquin Ski Club was permitted to operate on an experimental basis a portable electric ski lift on the lower slopes of the "ski bowl" near the lodge. As a result of the popularity of the lift and its apparent lack of impact on park resources, Leavitt urged that the lift be permitted to operate again the following winter.

By providing such winter visitor services and accommodations Leavitt felt that the park was building "good will throughout the state and local communities." At the same time he observed that there was "no great amount of warmth or friendly feeling among local groups for the park operator." This animosity existed despite various improvements in concession services and general rate reductions put into effect in 1939.[43]

The two years before American entry into World War II were banner travel seasons at Crater Lake National Park. Visitation reached all-time records to date with 252,482 visitors in 1940 and 273,564 in 1941. The summer recreational opportunities that attracted visitors in increasing numbers were, according to Superintendent Leavitt, hiking, auto touring, camping, boating, and fishing. The park trails in their order of popularity were the Crater Wall Trail, Watchman Lookout, Garfield Peak, Wizard Island, and Mount Scott. Winter visitation exceeded totals for previous years by nearly 50 percent, aided in part by the operation of a portable ski lift and two small gasoline-powered lifts on most weekends by the newly-organized Crater Lake Ski Club.[44] During these years the Crater Lake National Park Company installed new beds and mattresses in the lodge and made improvements to the housekeeping cabins, including placement of the beds and mattresses formerly in the lodge and installation of electric hot plates, oil heaters, and running cold water. Launch and rowboat facilities were improved. A permit was granted to the White Star and Hurry Cab Taxi Company in 1940 to provide transportation between Klamath Falls and Crater Lake during the winter months when the park concessioner was not operating its auto stages.[45]

On April 26, 1941, the National Park Service let a new 20-year contract (covering the period from January 1, 1941 to December 31, 1960) to the Crater Lake National Park Company. Under the terms of the agreement the company was authorized to:

a. establish, maintain, and operate a general hotel, cabins, and a camping business

b. install and operate such visitor facilities as a general merchandise business, laundries, barber shops, Turkish and other baths, and other amusements

c. maintain and operate docks, wharves, boathouses, power boats, rowboats, and boating equipment

d. sell meals, snacks, toiletries, souvenirs, and fishing, boating, and camping supplies

e. establish, maintain, and operate a general transportation service in and in connection with the park

f. establish, maintain, and operate trail transportation facilities and services

g. establish, maintain, and operate garages, gasoline stations, blacksmith and machine shops, stables, and corrals

h. establish and maintain hot-houses and gardens, when specifically authorized

The company was required to pay an annual fee of $500 plus 22½ percent of excess over a 6 percent profit margin.[46]

The company made a number of improvements to its facilities in 1941. Private toilets were added to the 22 sleeping cabins at the rim, and other exterior and interior improvements were made. Two four-room deluxe cabin units were constructed for which maid service was furnished. Each room was equipped with hot and cold running water, electric lights, private toilet and shower, automatic thermostat-controlled hot water and heat, one double bed, and two half beds. Steps were taken to correct the lodge sewage disposal problem, since water samples at the rim had shown evidence of contamination. Lodge rooms continued to be refurnished, such work being completed by early 1942.[47]

Wartime conditions, together with tire and gasoline rationing, resulted in drastic reductions to park visitation during the war years. Statistics indicate that park visitation for these years was 100,079 in 1942, 28,637 in 1943, 42,385 in 1944, and 77,864 in 1945. Beginning on November 23, 1942, the park was closed from mid-November to late June each year as a result of budget and personnel reductions and inability of the park staff to provide snow removal and visitor safety services. The concessioner closed the lodge and other visitor services in 1943 and did not resume such operations for the remainder of the war. Limited meal service was provided in the park headquarters dining room operated under contract by the aforementioned Robert P. Berry.[48]

During the war Crater Lake was visited by large numbers of military personnel from Navy and Marine facilities at Klamath Falls and Camp White, a U.S. Army base at Medford. The automobile permit fee of $1.00 per car charged to all visitors was suspended for automobiles carrying members of the armed forces, and campground and other special privileges were made available to them. Whenever a group arrived at the park a member of the staff was assigned to assist in its visit. Special literature was printed for distribution to military personnel. Park records indicate that 35,514 members of the armed forces visited the park during the war, not counting the families and friends that accompanied them.[49]

When Crater Lake was reopened on a year-round basis on July 1, 1946, visitation quickly returned to prewar levels. For the remainder of the 1940s visitation averaged approximately 250,000 annually. According to Superintendent Leavitt resumption of year-round operation and service to the traveling public by the Crater Lake National Park Company

> was hailed with satisfaction throughout the State of Oregon for, Oregon being a recreational state, the year-around operation of Crater Lake National Park is of tremendous importance to it. Recreation is the third largest industry in the state. The counties surrounding Crater Lake, which depend largely on recreational income, use Crater Lake as the magnet to attract tourists, and around which they build their advertising program to other areas which are not as favorably known. This is also true of the advertising program of the State Highway Commission through its Travel Information Department.

The company opened for business on June 15 and offered a full range of summer services until September 19. The season provided the "finest business in the history of the company," and the profits provided urgently needed funds with which to carry out many projects involving fire protection and safety in the lodge as well as replacement of cooking ranges and steam tables.[50] One of the innovations during the 1946 season was the subcontract entered into by the company with Scenery Unlimited of Berkeley, California, whereby the company brought a 35-passenger bus load of tourists to the park every two weeks as part of an excursion tour from San Francisco to Seattle up the coast and returning via the inland valley route. The experimental program was successful enough to have the subcontract renewed for 1947.

The company was requested by NPS Director Drury to provide winter services in the park during 1946-47. Accordingly, the company rented the park headquarters messhall and bunkhouse building and began furnishing meals and limited lodgings to park visitors and non-housekeeping employees of the Park Service on December 14. The company also entered into a subcontract with A.L. Vincze of Klamath Falls to provide a rope ski tow on the bowl below the lodge, limited ski equipment rental and ski lesson services, and transportation between park headquarters and the rim area.[51]

The return of large numbers of tourists to the park during the postwar years brought with it new problems for park management. The park was confronted with a new breed of park visitor as described by Superintendent Leavitt:

> Although there was not very much vandalism of a kind that destroyed irreplaceable objects, there was the usual writing of names on signs, the carving of initials on signs, guard rails, benches, etc., worst of all was the almost total disregard of sanitation. Visitors threw bottles not only alongside the roads everywhere throughout the park but often in the road and scattered papers, filled cartons, and camp refuse throughout the park wherever they went, with a total disregard for sanitation, cleanliness and respect for the person who came after them.
>
> In addition, it was found that we had an entirely different class of visitors to the park last year, people who had little or no appreciation of what the parks represented or what they stood for, so that there was a wanton disregard of the park rules and regulations and they did not take kindly to requests to obey these rules and regulations when they were called to their attention. . . .[52]

During the winters of 1947-48 and 1948-49 Crater Lake was operated on a day-use only basis. This experimental program meant that meals, lodging, and garage service had to be obtained outside the park with the exception of luncheon services provided at the Community House on Sundays and holidays. In commenting on the advantages and complaints generated by this experiment, Leavitt wrote on June 1, 1949:

> This plan had at least one advantage to the National Park Service in that by nightfall all visitors cars are removed from the park and are out of the way of our snow plows when clearing snow from roadways and parking areas, etc. It has a second advantage of holding down crowds to some extent during winter months which makes it easier for the National Park Service to take care of winter visitors.
>
> There is some complaint, however, on the part of skiers in our gateway cities who would like very much to be able to secure meals and lodgings in the park, and stay in the park over weekends. Experience has shown that the cost of furnishing such service is out of all proportion to the revenues received.[53]

During the late 1940s long-standing problems between the National Park Service and the Crater Lake National Park Company came to a head. In June 1949 Superintendent Leavitt reported:

> The principal concessioner in Crater Lake National Park has been noted for many years for his reluctance to cooperate with the National Park Service in providing the best possible service to the public at reasonable rates and in the development of good public relations with park visitors and nearby communities. The concessioner has failed to give full understanding and recognition that it is an arm of the government, designed to give service to the public under the general regulations and supervision of the Service.
>
> For the past two years, the principal stockholder has been desirous of selling his stock interest to a person who would take over the active management and principal ownership of the corporation. He has not been successful in the sale of this stock and the confusion that has resulted recently from changing policies regarding concessioner operations in the park has not made the task of finding a new owner any easier.[54]

One of the attempts by R.W. Price, president of the Crater Lake National Park Company, to sell the concession occurred in April 1948. It was announced that the company was being sold to the Michael E. Lee family of Oakland, California. A former real estate operator in Portland before moving to California, Lee had considerable experience in hotel management. The financial negotiations, however, fell through the following month, and R.W. Price, who had wanted to retire, continued as president and principal stockholder of the firm.[55]

Large numbers of tourists were attracted to Crater Lake during the winter of 1949 when the lake froze over for the first time in recorded history. The lake was solidly frozen to depths ranging from 2 to 12 inches and snow-covered from February to April. The freeze aroused "widespread interest," and, according to the Annual Report of the Director of the National Park Service, "visitors to the park, many of whom were attracted there by this unusual occurrence, beheld an expanse of white in place of the sapphire waters so justly famous."[56]

Increasing amounts of leisure time, higher levels of income, and improved transportation-related facilities contributed to rising park visitation during the 1950s. The annual average for the decade was more

Crater Lake National Park Company

Year	Net Worth Beginning of Year	Income	Expense	Net Profit (Loss-)	Rate of Return
1938	$79,877.33	$ 86,726.40	$ 90,955.67	$-4,229.47	-5.29%
1939	74,872,84	103,818.07	95,621.95	8,196.12	10.95%
1940	83,068.96	100,613.49	97,913.18	2,700.31	3.25%
1941	84,973.85	112,085.93	109,290.74	2,795.19	3.29%
1942	87,769.04	23,254.80	49,757.91	-26,503.11	-30.20%
1943	61,707.33	3,965.08	14,189.61	-10,224.53	-16.57%
1944	51,482.80	2,467.77	4,497.46	-2,029.69	-3.94%
1945	49,453.11	10,042.04	8,380.39	1,671.90	3.38%
1946	50,794.27	200,016.04	175,942.87	24,073.17	47.39%
1947	84,867.44	256,385.39	242,169.02	14,216.37	18.39%
Totals		$899,375.26	$888,709.00	$10,666.26	
Yearly Average	$69,886.70	$ 89,937.53	$ 88,870.90	$ 1,066.63	1.53%

Memorandum for the Director, Chief of Concessions, June 23, 1948, RG 79, Central Files, 1933-49, File No. 900-06, National Park Service, Rates Crater Lake Park Co., 1948.

than one-third million, the totals ranging from a low of 306,668 in 1951 to a high of 370,554 in 1954. This rising visitation was encouraged by increasing exposure of the park in national travel periodicals such as Travel and Sunset. The growth in visitation led to innovations in entrance checking procedures, the most significant being issuance of entrance permits by machine in 1953.

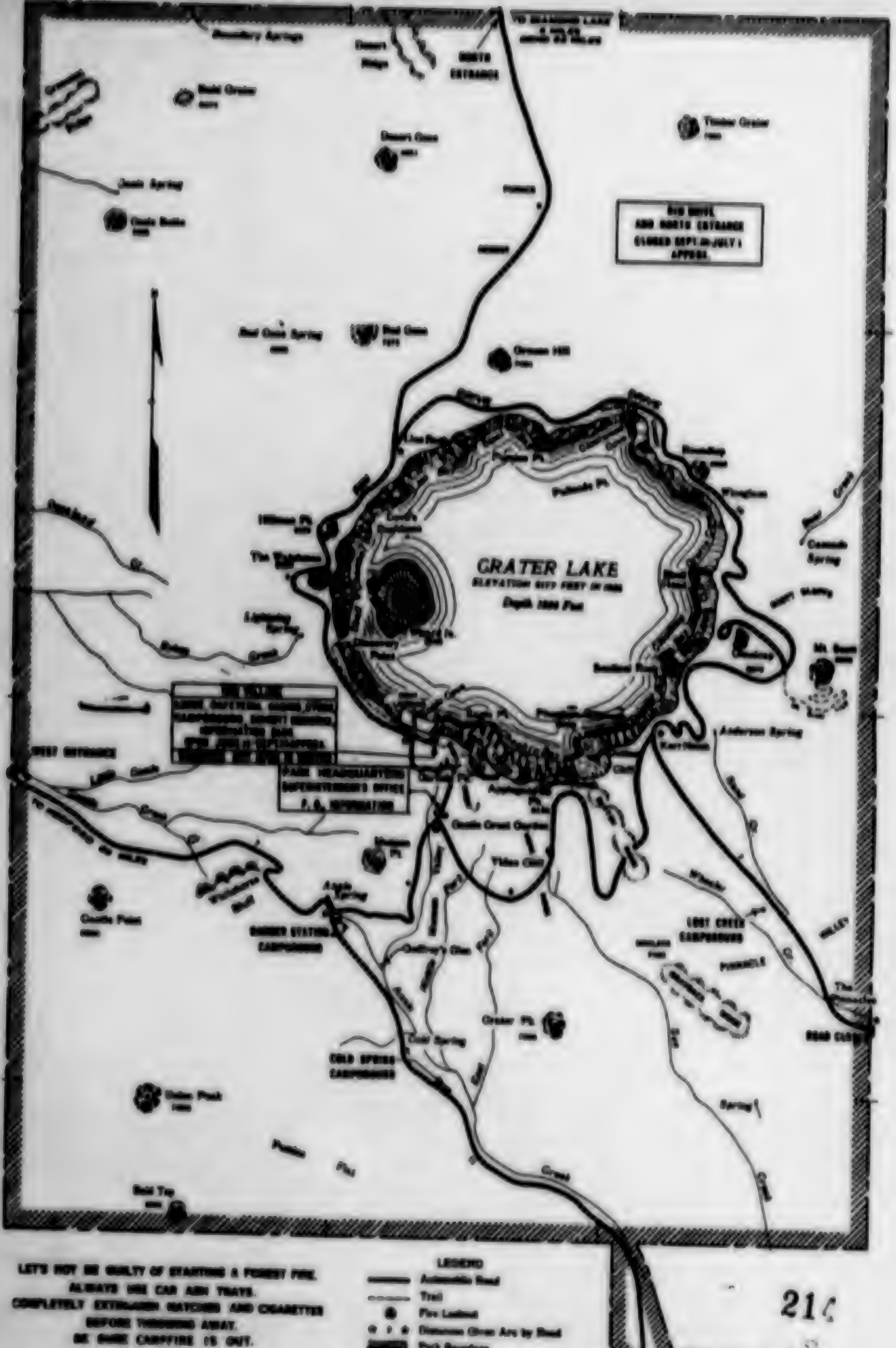
During the summer of 1950 a survey was conducted by the U.S. Department of the Interior at Crater Lake National Park and Oregon Caves National Monument. The purpose of the survey was to determine tourist expenditures and travel occasioned by the two areas and examine the economic impact that they had in the general economy of the Rogue River Basin. The study provided a statistical breakdown of the travel flow through the park:

Entering	Entering	Leaving	Total
North	133,699 - 43.2%	114,920 - 37.1%	248,519 - 40.1%
East	3,095 - 1.0%	16,403 - 5.3%	19,498 - 03.2%
South	86,657 - 28.0%	82,943 - 26.8%	169,600 - 27.4%
West	86,037 - 27.8%	95,322 - 30.8%	181,359 - 29.3%

Other data obtained by the study included:

a. 87% planned in advance to visit the park.
b. The park was the principal objective of 63.4%.
c. 83% spent one day or less in the park.
d. 17% stayed overnight and remained an average 1.2 days in the park.
e. 14.1% reported a visit to Oregon Caves National Monument.

Vacation travel resulted in an expenditure of $3,945,000 within the southwestern section of Oregon.[58]



LET'S NOT BE GUILTY OF STARTING A FOREST FIRE.
ALWAYS USE CAR ASH TRAYS.
COMPLETELY EXTINGUISH MATCHES AND CIGARETTES
BEFORE THROWING AWAY.
BE SURE CAMPFIRE IS OUT.

[1956]

21

The 1950s witnessed considerable turmoil and change in the concession arrangements in Crater Lake National Park. In May 1950 Superintendent Leavitt referred to some of the problems that the Park Service was having with the Crater Lake National Park Company:

> Most of the concessioners were disturbed by some of the new policies and the new form of contract adopted by the Service. Many felt insecure in their investment and their chances of continuing in operation. As a result, there was little effort made for improving existing facilities or constructing new ones. Now that many of the policy features that were questioned have been satisfactorily adjusted, closer cooperation between the National Park Service and its concessioners is to be expected.
>
> The Crater Lake National Park Company finally completed its fire protection improvements at Crater Lake lodge at the beginning of the 1949 season, and these improvements together with the better control of the watchman service provided a reasonable protection to Crater Lake lodge and its guests.
>
> The company was officially advised last winter that it might continue to operate the lodge for the duration of its contract period, which extends for another twelve years, but conditional on the installation of an automatic sprinkling system. If this project is carried out, the National Park Service will have to share the project because the furnishing of an adequate water supply at all times is one of the first and most essential requirements.[59]

During 1950-51 relations between the Crater Lake National Park Company and the traveling public, Park Service, and company employees "reached a new low." Superintendent Leavitt noted, however, that there had been a "lack of cooperation on the part of the company with the National Park Service" for many years. A special effort to improve these conditions was undertaken on May 7, 1951, at a meeting held in Portland with NPS and company officials in attendance. As a result assurances were given by the company "that every effort would be made at once to improve relations" in the aforementioned three problem areas.[60]

The Crater Lake National Park Company was sold by R.W. Price in 1954 to Harry W. and Harry C. Smith, father and son restaurant operators from Spokane, Washington. The new proprietors made various improvements to concession facilities during the five years they owned the company. A new addition to the cafeteria was completed in 1956, and the dining room, lounge, lobby, sales area, and nine guest rooms in the lodge were remodeled during 1957-58. Other refinements were made to the lodge, and newspapers heralded the fact that it had 114 rooms able to accommodate 294 people and 90 employees. In 1958 the Standard Oil Company constructed a new service station and employees' dormitory at park headquarters under the terms of its subcontract.[61]

On June 4, 1959, Ralph O. Peyton and James M. Griffin of Portland purchased the Crater Lake National Park Company. Their firm, Crater Lake Lodge, Inc., did not begin operating the park concession, however, until October 1. One of the first innovations introduced by the new owners was a temporary tent-top wood frame-and-floor structure to serve as an ice-salon and staple grocery supply point near the Mazama Campground for the 1960 season.[62]

As the existing concession contract was nearing expiration on December 31, 1960, Park Service officials entered into negotiations with Peyton and Griffin concerning new contractual arrangements. One of the principal issues discussed in these meetings was the deteriorating condition and future use of the lodge. Both sides felt that the lodge was not worth expending large sums for rehabilitation, modernization, and fire-proofing. For a period of time the Park Service considered purchasing the outmoded lodge and converting it into a visitor center with a museum, information room, and auditorium for lectures. If this were done the concessioner would build a two-story, 250-guest motel across the parking area east of the lodge and construct additional dining facilities. Nothing came of these negotiations, and a new contract was approved for the park concession in late 1960.[63]

Park visitation continued to increase during the 1960s with an average annual total of nearly 500,000 for the decade. The highest annual total for the period occurred in 1962 when 592,124 persons entered the park. Superintendent Yeager attributed that figure, which was more than 175,000 above the previous high, to two articles on the park that were printed in the July issue of National Geographic combined with travel to and from the World's Fair at Seattle from April 21 to October 21. Throughout the decade park visitation was encouraged by articles in national periodicals.[64]

During the 1960s various visitation studies were conducted by the National Park Service to determine visitor use patterns. One such study was conducted in connection with the park master plan during the summer of 1964. An analysis of the 1963 visitor totals revealed that 346,009 of the year's total visitation of 475,684 entered the park in July, August, and September for a daily average of 3,761. The study found that 83.4 percent of park visitors were from three states: California (45%), Oregon (29%), and Washington (9.4%). During the previous winter more than 90 percent of park visitors had come from the three states. Visitation by various group types was composed primarily of the single car family, although bus tours arrived regularly during the summer. Single entry use constituted more than 99 percent of all permit sales. Fifteen percent of summer visitors stayed in the park overnight, 34 percent staying at the lodge and cabins and 66 percent in the campgrounds. During the summer season 60 percent of park visitors spent 1 to 4 hours in the park and 20 percent 4 to 8 hours. In winter 80 percent of the visitors spent 2 to 4 hours in the park.[65]

In 1968 a more detailed analysis of park visitation and visitor use trends was undertaken. The study indicated:

> Crater Lake National Park is a stopover rather than a terminal destination area. Visitation occurs predominantly between Memorial Day and Labor Day. In 1968, this period accounted for roughly 75% of the 578,000 total visitation. Autumn, September through November, received 15% of use; winter, December through February, received two per cent; and spring, March through May, received eight per cent.
>
> Park visitation is primarily sightseeing in nature and is increasing at a modest rate, projected at about 50,000 (+9%)

Visitor Activities

Activities	Participants			
	1958	1963	Maximum	24 hr. period
Automobile Sightseeing	267,114	380,547	5,964	8/31/63
Conducted Trips	3,789	5,019	130	7/27/63
Interpretive Talks	39,604	51,767	1,200	8/13/63
Attended Stations	96,050	136,909	3,078	8/18/63
Self-guiding	210,000	499,000	7,455	8/31/63
Wilderness Use (hiking)	-	300	12	8/63
Overnight Use:				
Developed Auto Camps	36,850	47,944	1,029	8/9/63
Lodge 67% Cabins 33%	18,426	20,223	295	8/13/63
Water Use:				
Boating (launch towers)	2,414	3,101	52	7/14/63
Rowboats (rental)	-	2,500	41	7/63
Fishing	-	4,700	75	
Picnicking	-	19,464	1,100	
Winter Activities:				
Sightseeing	-	5,000	200	
Cross-country skiing	-	3,000	60	
Misc. Snow Play	-	70,000	700	

annually. Camping pressure is increasing at a substantial rate, particularly in the self-contained vehicular class. During the summer the demand for overnight accommodations usually exceeds the park capacity of 290 campsites by early evening.

The park is within three hours drive of several population centers such as Klamath Falls, Medford, Grants Pass, Eugene, and Bend, but 45% of summer visitation is from California, 26% from Oregon and eight per cent from Washington. The remaining 20% is from all other states, none of which accounts for a significant representation. Access to the park is through Klamath Falls to the south, Medford to the west, and Bend to the north.

Picnic areas are well used. About two percent of summer visitors use park picnic sites. Hiking is relatively light, being centered around the trails to Cleetwood Cove, Watchman Lookout, Garfield Peak, with lesser use on the Mount Scott, Union Peak, and Cascade trails. Each summer three or four horseback parties ride the Cascade Trail. Fishing is common but light on the lake and minimal on park streams. Boating is confined to concession-operated boat tours on the lake. Winter use shows a great increase in oversnow vehicle use. Over 500 such vehicles were recorded during the winter of 1968-69; most use occurs from February through April.

Significant trends in park use for the 1958-68 decade were:

Camping increased from 36,850 in 1958 to 59,947 in 1968. In 1968 overflow camping amounted to 2,123.

Camping pressure was heavy. The limiting factor was the number of developed sites; only 290 were available.

Picnicking pressure was moderate.

Hiking was steadily increasing from 7,000 in 1958 to 15,667 in 1968. This figure included guided walks.

Launch Tours by the concessioner showed a dramatic increase from 2,414 in 1958 to 6,035 in 1968.

Despite such trends park management concluded:

> The trends regionally and in the park indicate increased visitor pressure. Our resource capacity has not been reached. Significant increases can be handled without going beyond the carrying capacity of this park and destroying the park values we must maintain.[66]

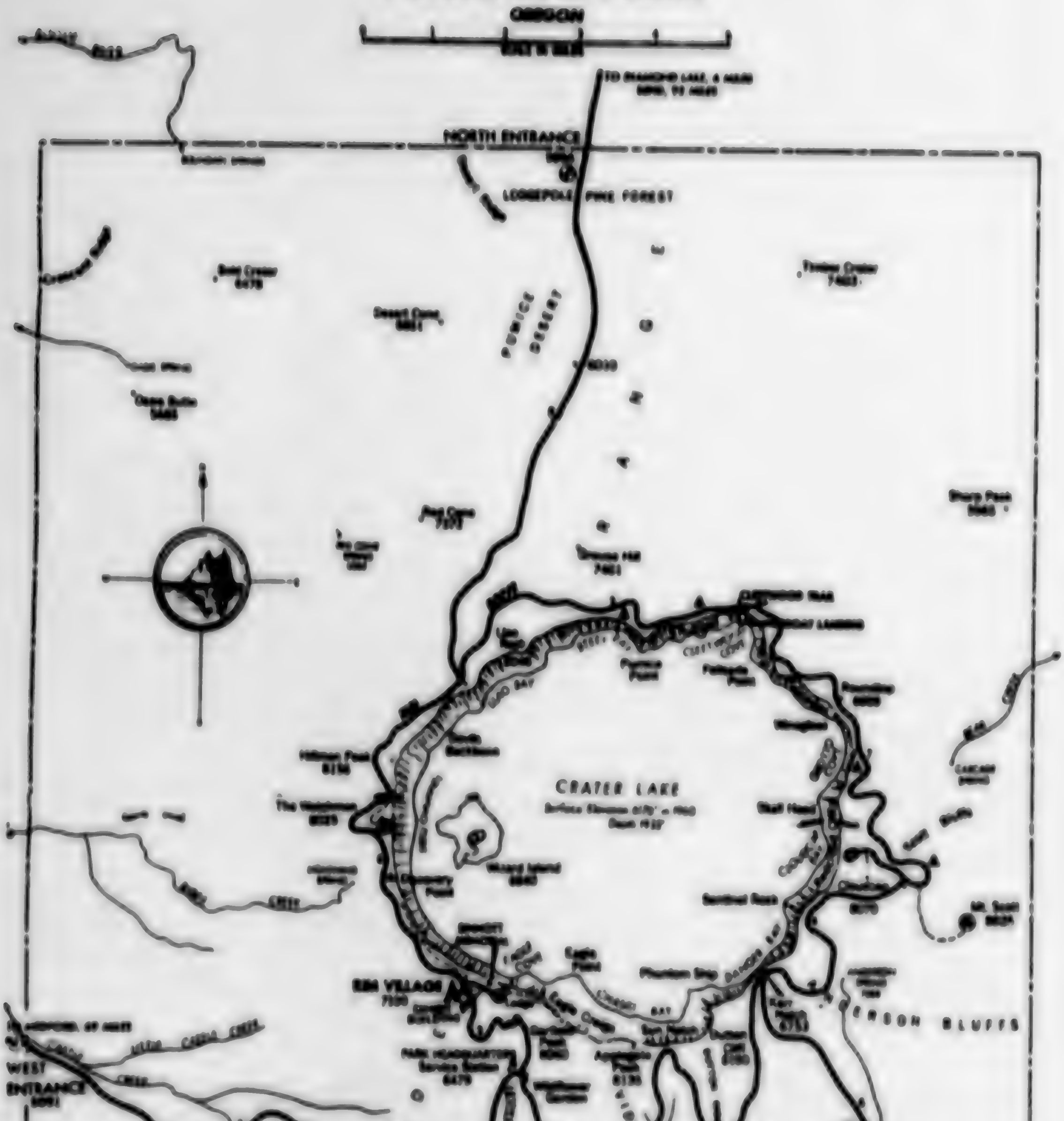
The Mission 66 program at Crater Lake included a variety of improvements to facilities and services designed to upgrade the quality of the "visitor experience" in the park. The elements of this "experience" were ably described in the annual park handbook. For the purpose of understanding the "visitor experience" in the park as a result of the Mission 66 program the 1965 edition of the handbook will be used. (A map of the park in 1965 may be seen on the following page.)

Park orientation revolved around two loci. These were the Exhibit Building in Rim Village and the Sinnott Memorial. Orientation was also provided during the evening campfire programs.

The handbook contained pointers on how the visitor could explore the park on his own via roads and trails. Interpretive markers were placed at many turnouts along the park roads. Among the points of interest that the visitor could explore on his own were Rim Drive, the Pinnacles, Cloudcap, and the Pumice Desert. Launch trips around the lake and boat trips to Wizard Island were highlights of any trip to Crater Lake.

A number of hiking trails were available to bring the visitor into close contact with nature. The recently-constructed 1.1-mile Cleetwood Trail, located on the northeast wall above Cleetwood Cove, led to the lakeshore from where the launches embarked. Trails led to Garfield Peak, Discovery Point, the Watchman, and Mount Scott. A self-guiding nature trail led through the Castle Crest Wildflower Garden less than one-half mile from park headquarters.

CRATER LAKE
NATIONAL PARK



The naturalist program, described elsewhere in this study, consisted of four principal elements. These were information, lectures, campfire programs, and guided trips.

The handbook contained information that pertained solely to winter visits. The Park Service maintained two ski trails from Rim Village to park headquarters. On weekends and holidays from mid-September to mid-June the coffee shop at Rim Village offered light refreshments and souvenirs. Overnight accommodations were available at several locations near the park. The south and west entrances were maintained as all-year roads, while the north entrance and Rim Drive were closed from late September to July 1.

Free and non-reserved campgrounds were open from about July 1 to September 30, depending on snow conditions. Mazama and Annie Spring campgrounds, near the junction of the south and west entrance roads, and Rim Village Campground had fireplaces, tables, water, and flush toilets. Lost Creek Campground, on the road to The Pinnacles, had fireplaces, tables, water, and pit toilets. No utility connections were available for house trailers. The lodge and cabins at Rim Village were open from mid-June to mid-September. There were eight picnic areas equipped with tables and pit toilets.

The handbook listed a variety of services in the park. The lodge dining room was open during the same period that the lodge was in operation. In summer the cafeteria in Rim Village served meals from 7 a.m. to 8:30 p.m. During the winter it operated as a coffee shop on weekends and holidays. Groceries were available at the cafeteria. Rowboats and fishing supplies could be rented at the boat landing at the foot of Cleetwood Trail. A branch post office was located in the Administration Building at park headquarters. Protestant church services and Sunday School were conducted at Community House in Rim Village and at the amphitheater in Mazama Campground. Several 2½-hour launch trips were provided each day, and scenic bus trips around Rim Drive, beginning at the lodge, were scheduled daily. A gasoline station was open during the summer near park headquarters.[67]

Peyton and Griffin continued to make improvements to the lodge during the late 1960s. During 1965-67 it was refurbished with new carpeting and furniture. In 1967 a partial sprinkler system was installed primarily to protect the lobby area against fire.[68]

While these improvements were underway the National Park Service negotiated a new 30-year contract with Crater Lake Lodge, Inc. The contract contained the usual provisions for the concessioner to provide lodging, food and beverage, transportation, service station, boat, and merchandizing services in the park. One of the innovations in the contract, however, provided that the concessioner would operate the park campgrounds on a fee basis with a reservation system. This set a precedent in National Park Service history since Crater Lake was the first park to introduce concessioner-operated fee campgrounds. The company also agreed to contract and operate a trailer village.[69]

Subsequently, Peyton and Griffin announced a $2,000,000, nine-year building program at Crater Lake. The ambitious plans, most of which were never fulfilled, included a 100-site trailer village adjacent to Mazama Campground, a 50-unit motel with coffee and gift shop at Munson Valley, replacement of the existing Rim Village cold-water cabins with modern single-family units, expansion of the existing cafeteria and gift shop, construction of a new 160-employee dormitory at Rim Village, and reconstruction of the lodge into a low-profile structure of 50-60 rooms having spacious dining and recreation facilities.[70]

Backcountry hiking became an increasingly popular form of recreation activity at Crater Lake during the late 1960s. This phenomenon was especially true after Congressional establishment of the Pacific Crest Trail on October 2, 1968. The trail extended for 33 miles through the park on its 2,350-mile circuit along the mountain ranges of the West Coast states from the Mexican-California border to the Canadian-Washington border.[71] Later in 1970 the fire access trails that had been constructed in the 1930s were converted for use as backcountry hiking trails.

Visitation to Crater Lake during the 1970s averaged nearly 540,000 per year. The highest totals were 606,636 in 1976 and 617,479 in 1977 when Bicentennial-related travel contributed to rising visitation levels throughout the National Park System. The lowest visitation of the decade occurred in 1975 when only 427,252 persons entered the park as the result of the water contamination crisis that closed the park for 21 days. Other factors that affected visitation levels during the 1970s were sporadic gasoline shortages and the rising cost of fuel.

In July 1977 the National Park Service conducted a visitor use study of the park. Included in the study was an analysis of existing visitor use patterns. Among the findings of the study were:

> Crater Lake is principally a day-use area, with approximately two-thirds of its yearly half million visitors staying less than four hours. Visitation occurs mainly in the summer, with 75 percent arriving from Memorial Day to Labor Day.
>
> For most visitors, a stop at Crater Lake is a part of a north-south trip which includes visits to other areas. Although the average visitor remains a short time, he has deliberately ventured off the main travel routes just to see the lake. Almost 80 percent of the visitors are West Coast residents, over half of these from California.
>
> For the small percentage of people remaining overnight (15 percent), about two-thirds of those camp in Mazama Campground, approximately half utilizing recreational vehicles. The 12-site Lost Creek Campground offers primitive camping and receives relatively light use, while Crater Lake Lodge and Cabins accommodate approximately one-third of the overnight demand.
>
> Backcountry use is still minimal, with the Pacific Crest Trail receiving the heaviest use. Winter use is also minimal (but steadily increasing), consisting mainly of regional residents sightseeing. Cross-country skiing and snowshoeing is largely concentrated around park headquarters and the Rim Village, while snowmobiling is restricted to the park road from the north entrance to the caldera rim.
>
> Heaviest day use activity is centered around Rim Village and Rim Drive, which affords many scenic overlooks. Rim Village now contains the main interpretive facility, Sinnott Memorial, and most of the support facilities, including a cafeteria, cabins,

> lodge, and store. During the summer, approximately 500 people a day hike down to Cleetwood Cove and take a launch for a guided tour around the lake.
>
> Limited information is provided at the entrance stations, and geologic interpretation is provided on the rim at Sinnott Memorial through personal services and exhibits. Approximately 20 interpretive waysides are located on the Rim Drive and more on the approach roads. Grayback Ridge Motor Nature Road offers an interpretive tour relating the theme of *Evolution of a Landscape*.
>
> The typical day visitors arriving from the south will proceed to the Rim Village, park their vehicles, and proceed to the rim for their first view of the lake or to the concessioner facilities and then to the viewing areas. They may attend one of the talks in the Sinnott Memorial and view the exhibits in the exhibit building.
>
> Depending upon the remaining time available, they may stop at other viewpoints, take a boat tour, or proceed on to their next destination.
>
> Visitors entering the park from the north receive information at the North Entrance Station and proceed toward the rim. At the road junction with the Rim Drive, they may choose either the longer route to the left with its numerous overlooks and viewpoints of the lake or the shorter route to the right along the west side of the lake to reach the Rim Village.[72]

In July 1975 some 1,500 park visitors and employees became sick as a result of sewage contamination of the park's water supply system. This necessitated the closure of the park for three weeks. Crater Lake Lodge, Inc., and Ralph Peyton were co-defendants in the ensuing litigation. Although their defense attorneys argued that the federal government, not the concessionaire, was ultimately responsible for the illness of park visitors, the jury decided that Peyton and his company demonstrated "wanton misconduct" in not warning guests of the outbreak of illness among concession employees.

Following the epidemic outbreak, the concession rights in the park were sold for $1,900,000 to the Canteen Company of Oregon, a subsidiary of Trans World Airlines, on March 1, 1976. Among the conditions incorporated in the terms of the transfer by the National Park Service were the following: (1) no possessory interest to be allocated the concessioner in 19 cold water cabins; (2) cold water cabins and two fourplex units to be removed within ten years; and (3) concessioner contract to be rewritten in compliance with the park's master plan provisions. Under the provisions of the contract for concession privileges in the park, the National Park Service owns the lodge subject to the small possessory interest gained by the concessioner through the subsequent installation of a sprinkler system.[73]

The current status of visitor services and facilities is reflected in the park's "Statement for Management" approved in October 1986. The document states that a "majority of the visitors come to the park to see the lake, may stop at some of the pullouts along park roads, and may participate in interpretive programs offered primarily in the Rim Village area." Two automobile campgrounds provide 210 sites. Mazama Campground (198 sites) has modern, cold-water comfort stations and an amphitheater for evening programs, while Lost Creek Campground (12 sites) is more primitive. Mazama is operated by the park concessioner and is sometimes the recipient of complaints since it lacks hot water and showers.

The Rim Village area is a complex of isolated structures dating primarily from the 1920s and 1950s that are connected by a network of roads, extensive parking areas, and walkways. Although originally developed as a rim promenade from which to view the lake, increasing visitation led to periodic expansion of parking and related facilities. At the present time pedestrians along the rim must remain cognizant of traffic movement and must cross busy traffic lanes and parking areas to reach many of the lake viewpoints and park facilities.

The concessioner operates 20 cold-water cabins behind the cafeteria building and the 80-room lodge, which are available to visitors for approximately 90 days each summer season. The lodge contains some substandard rooms and has various structural defects, conditions which have led to extensive debate and study during the 1980s as to the economic feasibility of rehabilitating and restoring the historic structure for continuing use.[74] The concessioner also operates a cafeteria/curio shop in Rim Village on a year-round basis and a summer season service station in Munson Valley, and provides bus tours around the Rim Drive and boat tours on the lake.

NPS facilities in Rim Village are limited. The old Community Building, now referred to as the Rim Center, serves as an auditorium for summer interpretive programs. The facilities are minimal, however, and the location does not attract heavy use. The structure was damaged severely by heavy snows during the winter of 1982-83 and currently is unsafe for winter use.

The Exhibit Building, a small structure on the rim now referred to as the Rim Visitor Center, is in an obscure location and visitation is low. This structure nevertheless serves as the principal contact point between NPS personnel and park visitors with the exception of the entrance stations. The building contains a small information and sales area and minimal exhibits.

The nearby Sinnott Memorial offers spectacular views of the lake. Regularly scheduled talks on the formation of the lake are given here, and a small exhibit room emphasizes the geological processes that created the lake. Access to the structure is via a steep path and stairs, and it is only open during the summer.[75]

The interim development concept plan that was adopted for the Annie Spring-Rim Village corridor in April 1985 calls for the expansion of visitor services and facilities in that area. The plan provides for the development of expanded camper services adjacent to the Mazama Campground in the area south of the campground entrance road, including a general store, snack service, shower and laundry facilities, gas station, and registration office for some 20-36 budget cabins. These cabins are to be constructed next to the campground and camper services facility, replacing the deteriorated cold water cabins in the Rim Village area. The plan also provides for the addition of up to fifty individual sites in the Mazama Campground and consideration of at least one nearby group campsite, pending further study and evaluation. Among the improvements contemplated at Rim Village are removal of the dilapidated cold water cabins behind the cafeteria building and the Community Building and development of a new interpretive facility plus an alternative for developing exhibits on park history on the second floor of the lodge. Improvements have been commenced on the lodge, including installation of a fire suppression sprinkler system to ensure the safety of visitors while ongoing studies are being undertaken to provide information on the economic and engineering feasibility of rehabilitating the existing lodge for "rustic" accommodations and provide additional information to facilitate continued evaluation of various options for possible adaptive uses and/or disposition of the structure.[76]

APPENDIX A

Schedule of Basic Rates
-ooOoo-
Crater Lake National Park Company
Crater Lake National Park
-ooOoo-
1938 Season

CRATER LAKE NATIONAL PARK

CRATER LAKE NATIONAL PARK COMPANY

Address of Park Operator

Summer: Crater Lake National Park, Medford, Oregon.
Winter: 3966 S. E. Hawthorne Blvd., Portland, Oregon.

Opening date June 15, 1938
Closing date September 20, 1938

Schedule of Basic Rates for the Season of 1938

-ooOoo-

All the rates of the authorized public utilities for service within the park are approved by the Government. They are subject to change without notice. The National Park Service has no direct supervision over the rates or services given outside of the park; such rates, where shown, are furnished for the information of the public. Employees of transportation lines, hotels, camps and stores are not Government employees.

AUTO-STAGE SERVICE FROM RAILROAD POINTS TO CRATER LAKE

July 1 to September 20

The Crater Lake National Park Company will operate regular daily automobile service from Medford and Klamath Falls, Oregon, to Crater Lake Lodge on the rim of the lake, and return to the same or other entrance gateway as desired; round trip, with lake boat trip privilege, per person $6.00

Round trip from either Medford or Klamath Falls and return for private parties, plus the regular stage fare for the number of people occupying the car, per day $16.00

Automobile Schedules:

From Medford: Automobile stages leave the Southern Pacific Depot at 9:00 A. M. Stages call at all hotels before starting for park. Stages arrive at Crater Lake Lodge at 11:30 A. M.

Returning to Medford, automobile stages leave Crater Lake Lodge at 3:00 P. M., arriving in Medford at 5:30 P. M.

From Klamath Falls: Automobile stages leave railroad depot and call at the principal hotels at 8:00 A. M., and arrive at Crater Lake at 10:00 A. M.

Returning to Klamath Falls, automobile stages leave Crater Lake Lodge at 4:45 P. M., arriving at Klamath Falls about 6:30 P. M.

/

Note: Revision in railroad time schedules may alter slightly the above stage schedules. However, visitors need not be concerned over slight changes, as the stages will meet both the northbound and southbound morning trains arriving in Klamath Falls daily; similarly will meet the northbound and southbound trains into Medford; and outgoing stages will depart for Medford and Klamath Falls each afternoon in time to meet outgoing trains at these points.

TRANSPORTATION WITHIN THE PARK

Automobiles:

The Crater Lake National Park Company operates an automobile service at the lodge available for hire within the park. Regular trips within the park are made at the following rates:

To Sunset Drive, to the summit of the road at the Watchman, a 10-mile drive, per person	$ 1.00
Round trip, per passenger, from Annie Spring Checking Station to Crater Lake Lodge for people coming into the park in FOR HIRE cars	1.50

Launches and Rowboats:

The Crater Lake National Park Company operates a launch and rowboat service at the lake, which is available from July 1 until the day after Labor Day. Regular trips are made at the following rates:

Around Phantom Ship and Wizard Island, about 15 miles; launches leave boat landing at 9:00 A. M. and 2:00 P. M.; stop-over at island, if desired, per person	$ 2.00
Wizard Island and return; launches leave boat landing hourly, beginning at 9:00 A. M.; stay on island as long as desired; last launch leaves island for return trip at 4:30 P. M., per person ..	1.00
Rowboats, one person, per hour	.50
Each additional person, per hour	.25

(Rowboats are available between the hours 8:30 A. M. and 5:00 P. M.)

A complete line of suitable fishing tackle is available at the boat landing for purchase or rental.

Automobile Repair Rates:

Mechanic's time, per hour, $1.50; new parts, list price plus transportation charges.

Gasoline and lubricants are available at the service station near Park Headquarters throughout the season.

ACCOMMODATIONS

Hotel:

Crater Lake Lodge, on the rim of the lake, furnishes complete hotel service. It is of stone and frame construction and contains 105 sleeping rooms, a large number with baths. The rates are as follows:

	Persons	European Plan	American Plan
Room with bath and twin beds	2	$7.50	$13.50
Room with bath and twin beds	3	8.00	17.00
Room with bath and twin beds	4	8.50	20.50
Room with bath and double bed	1	5.50	8.50
Room with bath and double bed	2	6.50	12.50
Room with toilet and double bed	1	4.00	7.00
Room with toilet and double bed	2	5.00	11.00
Room with hot and cold water, double bed ...	1	3.00	6.00
Room with hot and cold water, double bed ...	2	4.00	10.00
Room with hot and cold water, two beds	3	4.50	13.50
Room with hot and cold water, two beds	4	5.00	17.00
Room with bowl and pitcher, double bed	1	2.50	5.50
Room with bowl and pitcher, double bed	2	3.00	9.00
Room with bowl and pitcher, two beds	3	3.50	12.50
Room with bowl and pitcher, two beds	4	4.00	16.00
Extra cot in room		1.00	

Meals for guests not occupying room:

Breakfast, $0.75; Luncheon, $1.00; Dinner, $1.25.

Dining room in Lodge open July 1 to Labor Day.

Guests wishing to take meals at Cafeteria instead of Lodge Dining Room will be charged European Plan rate.

It is expressly understood that where connecting rooms have access to private bath, each room is to be considered as having private bath, unless one or more of the rooms are locked off from bathroom. Children under eight years of age are charged half rates; children eight years of age or more are charged full rates. Babes in arms, no charge.

Housekeeping cabins:

Modern housekeeping cabins may be rented by the day and are located in close proximity to the cafeteria and store. Rates for this service are as follows:

Cabin without linen and blankets, including wood, per day	$2.00
Cabin with linen and blankets, including wood, per day	2.75
Extra cot in cabins, per day	1.00

CAFETERIA AND STORE

A large stone building, located on the new village site at the rim, houses the cafeteria, store, and studio, where provisions, tourists' supplies, fishing tackle, etc., are sold at reasonable rates.

During the height of the tourist season, the cafeteria is open between the hours of 6:30 A. M. and 9:00 P. M. The same standard of meals may be secured at the cafeteria as at the lodge, and at reasonable rates.

PHOTOGRAPHIC STUDIO

The new modern photographic studio in the cafeteria building has on sale photographic souvenirs, post cards, enlargements done in oil, camera supplies, etc. A quick developing service is also maintained for the convenience of park visitors.

Approval recommended:

A. E. Demaray
Acting Director.

Approved: APR 19 1938

Oscar L. Chapman
Assistant Secretary.

RG 79, Central Files, 1933-39, File No. 900-06, Crater Lake Co., Part 1, Crater Lake, Public Utility Operators, Crater Lake National Park Co., Rates, 1938.

APPENDIX B

1946

CRATER LAKE NATIONAL PARK

CRATER LAKE NATIONAL PARK COMPANY

Address of Park Operator

Summer: Crater Lake, Oregon
Winter: 5966 S. E. Hawthorne Blvd., Portland, Oregon.

SCHEDULE OF BASIC RATES FOR THE SEASON OF 1946

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All the rates of the authorized public utilities for service within the park are approved by the Government. Employees of the hotels, camps, and transportation lines are not Government employees. Any suggestions regarding service furnished by those public utilities should be made to the superintendent.

The National Park Service has no direct supervision over the rates or the service given outside the park: rates are furnished for the information of the public.

AUTO-STAGE SERVICE FROM RAILROAD POINTS TO CRATER LAKE

The Crater Lake National Park Company will operate regular daily automobile service from Grants Pass and Klamath Falls, Oregon to Crater Lake Lodge on the rim of the lake, and return to the same or other entrance gateway as desired: round trip with Sunset Drive trip,

per person.	$10.00
one way trip.	6.00

Round trip from either Grants Pass or Klamath Falls and return for private parties, plus the regular stage fare for the number of people occupying the car, per day $20.00

AUTO STAGE SCHEDULES:

Schedules for train and bus connections will be announced at a later date.

CAFETERIA RATES

BREAKFAST:

Tomato Juice	$ .20	Grapefruit	$ .20
Orange Juice	.30	Cantaloupe	.25
Prunes	.15	Bacon and Two Eggs and Coffee	1.00
Cooked or Dry Cereal and Cream	.25	Bacon	.50
Hot Cakes, Syrup, Butter	.25	Eggs (2)	.40
Ham and Two Eggs and Coffee	1.00	Toast	.10
Ham	.50	Coffee, Tea or Milk	.10
Ham or Bacon and Hot Cakes	.75		

LUNCHEON AND DINNER:

Soup	.20	Bread and Butter	.10
All Salads	.25	All Pies	.15
All Meat Orders, including Potatoes and Gravy	.90	Ice Cream	.20
		Watermelon	.25
Chicken Pie	.90	Pie A La Mode	.35
Columbia River Salmon	.65	Tea, Milk	.10
Macaroni and Cheese	.35	Coffee	.10
Baked Beans	.30	All Vegetables per order	.15

FOUNTAIN SERVICE:

Milk Shakes	.20	Pepsi Cola	.10
Ice Cream Sodas	.20	Soda Pop	.10
Ice Cream Sundaes	.25	Ice Cream Cones	.10

DINING ROOM MEALS

For patrons not stopping in the Hotel

Breakfast	$1.25
Luncheon	1.50-1.75 Steak
Dinner	2.50-3.00 N.Y. Sirloin Steak
Room Servide	$. 50 Per person

STORE, CAFETERIA, AND SLEEPING CABINS

A large stone building, housing the cafeteria, store, and studio, where provisions, tourists' supplies, etc., are sold is located on the new village site at the rim.

During the height of the tourist season, the cafeteria is open between the hours of 6:30 A.M. and 9:00 P.M. The same standard of meals may be secured at the cafeteria as at the Lodge.

The sleeping cabins may be rented by the day and are located in close proximity to the cafeteria and store. Rates for this service are as follows:

SLEEPING CABINS, Operated Under European Plan:

There are 22 sleeping cabins available at the rim. These are single room cabins, 12x16 feet in size and are equipped with cold running water, oil heater, electric lights, one double bed with linen and blankets, and 2 half beds with linen and blankets. Rates are as follows:

PERSONS	Rate per Cabin per Night
1 or 2	$3.00
3	3.75
4	4.50

Deluxe Cottages, Operated Under European Plan:

There are also two unit deluxe cottages, containing 4 rooms each. Maid service is furnished and each room is equipped with hot and cold running water, electric lights, private toilet and shower, automatic hot water and heat thermostatically controlled, one double bed and 2 half beds with linen and blankets. Rates for these rooms are as follows:

PERSONS	Rate per Room per night
1	5.00
2	6.00
3	7.00
4	7.50

Gasoline and Oil:

Gasoline and lubricants are available throughout the season at the service station near park headquarters, at following prices:

Chevron Gasoline	$ .27	per gallon
Chevron Supreme Gasoline	.29	" "
Kerosene	.28½	" "
Cleaning Solvent (Chevron)	.27½	" "
R.P. M. Motor oil	.38 qt.,	$1.40 gal.
Standard Penn	.38 qt.,	$1.40 gal.
Zerolene	.20 qt.,	$0.80 gal.

TIRE SERVICE

Patch, tube	.25¢
Service Charge, Dismounting and mounting Tire	.50¢
Install Tire Boot	.15¢
Battery Charge, installed in car	$1.00
Battery Charge, not installed in car	.75
Grease Job, depending on make of car	$1.25 to $2.15

GARAGE MECHANICAL SERVICE AND EMERGENCY ROAD SERVICES

Service car for tire service, delivery of gas, oil or parts, (one-half hour minimum) per hour $3.00

Towing, or mechanical first aid, (one half hour mininum) per hour 5.00

Road service rates include use of tow car or service car and time of one man. When car is waiting, or while roadside repairs are being made, there will be no charge for the car, but the man's time will be charged for at shop rates. Shop rates will also be charged for time of extra man, if required, from the time he leaves the shop until his return.

Automobile Repairs:

Mechanics' Time, per hour	$ 2.00
New Parts, list price, plus transportation charges	

Launches and Rowboats:

The Crater Lake National Park Company operates a launch and rowboat service at the Lake, which is available from July 1 until the day after Labor Day. This equipment has been inspected by the Bureau of Marine Inspection and Navigation for compliance with safety regulations. Regular trips are made at the following rates:

Launch Trips:

Around Phantom Ship and Wizard Island, about 15 miles; launches leave boat landing at 9:00 A.M. and 2:00 P.M; stop-over at island if desired, per person. . . . . $ 3.00

Wizard Island and return; Launches leave boat landing hourly, beginning at 9:00 A.M.; stay on Island as long as desired; last launch leaves Island for return trip at 4:30 P.M. per person . . . . $ 1.50

Rowboats for Fishing:

A launch will tow fishermen and their boats to fishing grounds. Launch will call for them at 4:30 P.M. for return to boat landing.

Each way, per boat	$ 1.00
Rowboats, per hour	$ 1.00
Rowboats, per day, 8 hours	$ 3.50

A complete line of suitable fishing tackle is available at the boat landing for purchase or rental.

RG 79, Central Files, 1933-49, File No. 900-02, Part 3, National Park Service, Crater Lake Park Company, Contract, 1948.

APPENDIX C

CRATER LAKE NATIONAL PARK ANNUAL VISITATION

1902	Unavailable
1903	Unavailable
1904	Est. 1,500
1905	Est. 1,400
1906	Est. 1,800
1907	Est. 2,600
1908	5,275
1909	4,171
1910	Est. 5,000
1911	Est. 4,500
1912	5,235
1913	6,253
1914	7,096
1915	11,371
1916	12,265
1917	11,645
1918	13.231
1919	16,645
1920	20,135
1921	28,617
1922	33,016
1923	52,017
1924	64,312
1925	65,018
1926	86,019
1927	82,354
1928	113,323
1929	128,435
1930	157,693
1931	170,284
1932	109,738
1933	96,512
1934	118,699
1935	107,701
1936	180.382
1937	202,403
1938	190,659
1939	225,101
1940	252,482
1941	273,564
1942	100,079
1943	28,637
1944	42,385
1945	77,864*
1946	188,794
1947	289,681
1948	243,533
1949	255,610
1950	328,041
1951	306,668
1952	323,410
1953	332,835
1954	370,554
1955	343,839
1956	359,840
1957	330,499
1958	333,893
1959	340,989
1960	330,398
1961	415,567
1962	592,124
1963	475,684
1964	494,057
1965	480,478
1966	552,531
1967	499,357
1968	578,271
1969	544,932
1970	534,962
1971	557,958
1972	594,343
1973	539,708
1974	525,030
1975	427,252
1976	606,636
1977	617,479
1978	580,061
1979	446,397
1980	484,256
1981	536,719
1982	484,283
1983	429,586
1984	499,945
1985	427,927

*1945 and preceding years are based on travel year ending in September.

ENDNOTES

1. U.S. Department of the Interior, National Park Service, General Information Regarding Crater Lake National Park, Season of 1917 (Washington, 1917), pp. 5-21, RG 79, Central Files, 1907-39, Privileges, Crater Lake Company to 1919, File No. 12-3 (Part 8), Parks, Reservations and Antiquities, Crater Lake National Park, Privileges, Crater Lake Company, 1915-18. Also see contract awarded to the Crater Lake Company effective January 1, 1917, in RG 79, Central Files, 1907-30, Privileges, Crater Lake Company (Proceedings against Parkhurst), 1922.

2. Annual Report of the Director of the National Park Service, 1917, pp. 11, 17, 19, 166, 191.

3. Ibid., p. 57.

4. Annual Report of the Director of the National Park Service, 1918, pp. 159-60.

5. Annual Report of the Director of the National Park Service, 1919, pp. 84, 217-18.

6. U.S. Department of the Interior, National Park Service, General Information Regarding Crater Lake National Park, 1919 (Washington, 1919), and "National Park Service News," August, 1919, p. 6, National Park Service Historical Collection, Harpers Ferry Center.

7. Annual Report of the Director of the National Park Service, 1920, pp. 136, 279.

8. Ibid., pp. 135-36, 279-81, and Salem Journal, August 13, 1920, Vertical Files, Oregon Historical Society, Portland. A Delco electric plant was in operation at the lodge for the first time in 1920, thus providing electric lighting for guests. One newspaper account described the condition of the lodge as "a rough, barnlike, unfinished building" with "one community lavatory" and "no bath." The "partitions between the rooms were plaster board which had shrunk, leaving cracks two and three inches wide in some places." Klamath Falls Herald and News, April 5, 1948, RG 79, Central Files, 1933-49, File No. 900-02, Part 3, National Park Service, Crater Lake Park Company, Contract, 1948.

9. First Assistant Secretary to the Crater Lake Company, September 14, 1920, RG 48, Central Files, 1907-36, File No. 12-3 (Part 1), Parks, Reservations, and Antiquities, Crater Lake, Privileges, Crater Lake Company, 1920-36.

10. Sydney B. Vincent, Chairman, Crater Lake Committee to Hon. B.W. Olcott, Governor of State of Oregon, December 17, 1920, RG 79, Central Files, 1907-39, Privileges, Crater Lake Company (Proceedings against Parkhurst), 1922.

11. *Annual Report of the Director of the National Park Service, 1920*, pp. 80-81, 224, and Albright to Dohrmann, May 17, 1921, RG 79, Central Files, 1907-39, File No. 900-05, Part 1, Crater Lake, Public Utility Operators, Crater Lake National Park Company, Miscellaneous Correspondence, 1921.

12. *Medford Mail Tribune*, August 29, 1921, quoted in "The Editorial," *Table Rock Sentinel*, V (1985), 19.

13. *Annual Report of the Director of the National Park Service, 1921*, pp. 224-25.

14. *Annual Report of the Director of the National Park Service, 1921*, pp. 82, 225. Records relating to the construction of the studio may be found in RG 79, Central Files, 1907-39, File No. 900-01, Part 1, Crater Lake, Public Utility Operators, Fred H. Kiser, Buildings.

15. The transactions that led to the removal of Parkhurst as park concessionaire angered Commissioner Steel. In May 1922 he initiated a letter-writing campaign to Oregon newspapers, charging Mather with fraudelent and scandalous practices in forcing Parkhurst out of the park without what he considered to be proper compensation. In September 1922 he wrote to President Warren G. Harding, demanding that Mather and Secretary of the Interior Albert B. Fall be removed from office. Finally in January 1924 Steel published a pamphlet, entitled "The Crater Lake Scandal," in which his letters on behalf of Parkhurst were printed. William Gladstone Steel, "The Crater Lake Scandal" (Eugene, 1924), pp. 1-9, RG 79, Central Files, 1907-39. The alleged mistreatment of Parkhurst was also discussed in Congressional debate in February 1924 during consideration by the House of Representatives of a Department of the Interior appropriations bill. *Salem Journal*, February 10, 1924, Vertical Files, Oregon Historical Society, Portland. For further data relating to Steel's accusation against Mather see Steel to the President, September 26, 1922, Steel to Mather, November 26, 1926, and Mather to Steel, December 6, 1926, Steel Scrapbooks, Crater Lake, No. 40, Vol. 8, Museum Collection, Crater Lake National Park.

16. Correspondence, Assignment, and Contract, RG 79, Central Files, 1907-39, File No. 900-02, Part 1, Crater Lake National Park, Concessions, Crater Lake National Park Company; United States Department of the Interior, National Park Service, Crater Lake National Park Company, Crater Lake National Park, Contract No. I-1p-80, January 1, 1922, to December 31, 1941, RG 79, Central Files, 1933-49, File No. 900-02, Part 1, Crater Lake National Park, Concessions, Crater Lake National Park Company, 1922-41; and *Annual Report of the Director of the National Park Service, 1922*, pp. 51-52, 129. Further data on these transactions may be found in Albright to Mather, April 19, 1922, RG 79, Central Files, 1907-39, File No. 900-05, Part 2, Crater Lake, Public Utility Operators, Crater Lake National Park Company, Miscellaneous Correspondence, 1921-22.

17. Ira Lantz, Special Agent, D.I. to Director of Investigations, Department of the Interior, August 19, 1935, RG 79, Central Files, 1933-49, File No. 204, Part One, Crater Lake, Inspections and Investigations, Division of Investigation.

18. *Annual Report of the Director of the National Park Service, 1922*, pp. 128-29.

19. *Annual Report of the Director of the National Park Service, 1923*, pp. 65-67, 143.

20. *Annual Report of the Director of the National Park Service, 1924*, pp. 49, 51, 118-20.

21. Josephine H. Forney, "The Lure of Crater Lake," *Union Pacific Magazine*, IV (June, 1925), 31-32.

22. *Klamath Falls Herald and News*, April 5, 1948, RG 79, Central Files, 1933-49, File No. 900-02, Part 3, National Park Service, Crater Lake Park Company, Contract, 1948.

23. *Annual Report of the Director of the National Park Service, 1925*, pp. 37, 104.

24. U.S. Department of the Interior, National Park Service, *Rules and Regulations Crater Lake National Park, Oregon, 1925*, RG 79, Central Files, 1907-39, File No. 208, Part 1, Crater Lake, Rules and Regulations, General. Earlier in 1920-21 less elaborate road signs had been installed along the park entrance roads.

25. *Annual Report of the Director of the National Park Service, 1926*, pp. 40, 114, 116; *ibid.*, *1929*, p. 29; *ibid.*, *1932*, p. 16; *ibid.*, *1933*, p. 183; Contract and related correspondence between the Crater Lake National Park Company and the Standard Oil Company, RG 79, Central Files, 1907-39, File No. 900-02, Part 1, Crater Lake National Park, Concessions, Crater Lake National Park Company; "Fort Klamath Community Club, First Annual Ski Race, Fort Klamath to Crater Lake Lodge and Return, General Rules and Information," [1927], Division of Interpretation Files, Crater Lake National Park; and "Ski Activity Isn't New," *Reflections*, III (Fall-Winter, 1978-79), 1, 4. Although the lodge was not open during the winter the Crater Lake National Park Company employed John Maben as its first winter caretaker in 1926-27. His diary for that period may be found in the Oregon Historical Society, Portland.

26. *Annual Report of the Director of the National Park Service, 1928*, p. 13, and *ibid.*, pp. 64, 67.

27. U.S. Department of the Interior, National Park Service, *Circular of General Information Regarding Crater Lake National Park, Oregon, 1930*, in *Circulars of General Information, The National Parks, 1930*, Rocky Mountain Regional Office Library, National Park Service.

28. *Stockton Record*, October 4, 1930, RG 79, Central Files, 1933-49, File No. 857, Part 1, Crater Lake, Travel, General.

29. Annual Report, Crater Lake National Park, 1927, RG 79, Central Files, 1907-39, File No. 207-001, Part 2, Crater Lake Reports, General.

30. *Annual Report of the Director of the National Park Service, 1929*, p. 64, and *Annual Report of the Director of the National Park Service, 1930*, p. 84.

31. Contract and correspondence, RG 79, Central Files, 1907-39, File No. 900-02, Crater Lake, Concessions, Contracts, Dr. Miller. Miller provided such services in the park until the outbreak of World War II. See Contracts in RG 79, Central Files, 1933-49, File No. 900-02, Part 1, Crater Lake, Concessions, Contracts, Dr. Miller (M.D.)

32. Larry Smith and Lloyd Smith, comps., *The Smith Brothers' Chronological History: Crater Lake National Park, Oregon, 1832 to 1985* [1985].

33. *Annual Report of the Director of the National Park Service, 1929*, p. 67. For more data on the financial difficulties of the Kiser Studio and its competition with the Crater Lake National Park Company see correspondence in RG 79, Central Files, 1907-39, File No. 900-02, Parts 1 and 2, Crater Lake, Public Utility Operators, Fred H. Kiser, Contracts, 1911-28 and 1929.

34. Annual Report, Crater Lake National Park, 1932, RG 79, Central Files, 1907-39, File No. 207-001, Part 2, Crater Lake, Reports, Annual, and *Annual Report of the Director of the National Park Service, 1932*, p. 41.

35. Annual Report, Crater Lake National Park, 1934, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendents Annual Report, and Smith and Smith, comps, *Smith Brothers' Chronological History*.

36. "Ranger Protection Requirements, Crater Lake National Park," 1940, RG 79, Central Files, 1933-49, Crater Lake National Park, File No. 207-005, Rangers, and *Annual Report of the Director of the National Park Service, 1942*, in *Reprint of the Annual Report of the Secretary of the Interior, 1942*, p. 187. Among the prominent visitors to the park during these years were Eleanor Roosevelt, Secretary of the Interior Harold L. Ickes, and ECW Director Robert Fechmer in 1935, New York Senator Robert F. Wagner in 1936, former President Herbert C. Hoover in 1937 and 1938, and Ohio Senator Robert A. Taft in 1940.

37. Annual Report, Crater Lake National Park, 1935, RG 79, Central Files, 1933-49, File No., 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report.

38. Annual Report, Crater Lake National Park, 1936, RG 79, Central Files, 1933-49, File No., 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report.

39. Annual Report, Crater Lake National Park, 1937, RG 79, Central Files, 1933-49, File No., 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report. For more data on the park visitor facilities and services in 1937 see U.S. Department of the Interior, National Park Service, Crater Lake National Park [Oregon], 1937, in Circulars of General Information, The National Parks, 1937, Library, Rocky Mountain Regional Office, National Park Service.

40. Final Narrative Report, Civilian Conservation Corps, Minor Roads and Trails, Major Roads, Park Operator to Chief Architect by Francis G. Lange, Resident Landscape Architect, Branch of Plans and Design, Region IV, Crater Lake National Park [October, 1937], RG 79, NPS, Western Region, Region IV, Resident Landscape Architect's Report to Chief Architect, 1927-40, Box 2, Final Narrative Report, 1938 (CCC), FRC, San Bruno.

41. Annual Report, Crater Lake National Park, 1938, RG 79, Central Files, 1933-49, File No., 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report.

42. Memorandum for the Director, E.P. Leavitt, Superintendent, April 26, 1939, RG 79, Region IV, Central Classified Files, 1923-1965, Crater Lake, Box 21, Folder 868, Winter Use, Part I, FRC, San Bruno. On October 1, 1939, Robert P. Berry of Medford was granted a permit to provide meal, sandwich, snack, and lodging services in the park headquarters messhall and bunkhouse when the concession facilities were not open. Permits and related correspondence, RG 79, Central Files, 1933-49, File No. 900, Part 1, Crater Lake, Concessions, Public Utility Operators, Robert P. Berry.

43. Annual Report, Crater Lake National Park, 1939, and Memorandum for the Director, E.P. Leavitt, Superintendent, July 24, 1939, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report. Also see Transportation Permit, Yellow Cab Company, December 17, 1938, and related correspondence, RG 79, Central Files, 1933-49, File No. 900, Part 1, Crater Lake, Yellow Cab Company, Terminal Cab Company, Concessions.

44. The Klamath Falls News Herald mounted a campaign in 1941 to have the park winter sports program expanded. The articles and Park Service response to resist such pressures may be found in RG 79, Central Files 1933-49, File No. 868, Part 1, Crater Lake, Winter Sports.

45. Annual Report, Crater Lake National Park, 1940, RG 79, Central Files, 1933-49, File No. 207-001.4, Part One, Crater Lake, Reports (General), Superintendent's Annual Report, and Memorandum for the Director, by Supervisor of Concessions, September 1946, RG 79, Central

Files, 1933-49, File No. 900-02, Part 1, National Park Service, White Star and Hurry Cab Taxi Co., 1946. For more information on the park in 1940 see U.S. Department of the Interior, National Park Service, *Crater Lake National Park, Oregon, 1940*, in *Circulars of General Information, The National Parks, 1940*, Library, Rocky Mountain Regional Office, National Park Service.

46. Crater Lake National Park Company, Crater Lake National Park, Contract No. 1-1P-80, January 1, 1941 to December 31, 1960, RG 79, Region IV, Central Classified Files, Box 22, Folder 900, Crater Lake National Park Company.

47. Memorandum for the Regional Director, Region Four Headquarters, E.P. Leavitt, December 22, 1941; Crater Lake National Park Company to the Director, October 28, 1941; and Crater Lake National Park Company, Schedule of Basic Rates for the Season of 1942, RG 79, Region IV, Central Classified Files, 1923-65, Crater Lake, Box 22, Folder 900, Crater Lake National Park Company, Part II, FRC, San Bruno. Also see Memorandum for the Director, E.P. Leavitt, Superintendent, October 23, 1941, RG 79, Central Files, 1933-49, File No. 660-05, Part 1, Crater Lake, Water Supply and Systems, General.

48. *Annual Report of the Director of the National Park Service, Reprinted from the Annual Reports of the Secretary of Interior, 1943, 1944, 1945,* and *1946*, pp. 220, 230, 228, and 347, respectively, and Annual Report, Crater Lake National Park, 1943, RG 79, Central Files, 1933-49, File No. 207-001.4, Superintendent's Annual Report. Large numbers of tourists were attracted to Crater Lake during the fall of 1945 when several clouds of smoke--or dust-filled gas--billowed from the lake, thus leading to speculation of renewed volcanic activity. "Scenic Volcano," *Time*, XLVI (November 12, 1945), 52, and "Crater Lake Volcano Is Not Dangerous," *Science News Letter*, XLIX (February 23, 1946), 120.

49. Leavitt to Franklin, June 15, 1946, RG 79, Central Classified Files, 1907-49, Crater Lake, Liaison Office.

50. "Report on Fire Safety, Crater Lake Lodge, Crater Lake National Park, Crater Lake, Oregon," by Frank L. Ahern, Chief, Safety Office, National Park Service, June 22 to 25, 1948, RG 79, Region IV, Central Classified Files, Box 18, Folder 801-Fire, FRC, San Bruno.

51. Annual Report, Crater Lake National Park, 1947, Files, Superintendent's Office, Crater Lake National Park, and Leavitt to McNeil, December 31, 1946, RG 79, Central Classified Files, 1907-49, File No. 868, Part 1, Crater Lake, Winter Sports.

52. Annual Report, Crater Lake National Park, 1947, Files, Superintendent's Office, Crater Lake National Park. It is interesting to note that Roman Catholic services were begun in the park during the summer of 1948 and Protestant services the following year.

53. Annual Report, Crater Lake National Park, 1949, Files, Superintendent's Office, Crater Lake National Park, and see Memorandum for the Regional Director, Region Four, E.P. Leavitt, Superintendent, February 18, 1949, RG 79, Central Classified Files, 1933-49, File No. 900-02, Part No. 3, National Park Service, Crater Lake Park Company, Contract.

54. Annual Report, Crater Lake National Park, 1949, Files, Superintendent's Office, Crater Lake National Park.

55. *Klamath Falls Herald and News*, April 5, 1948, RG 79, Central Files, 1933-49, File No. 900-02, Part 3, National Park Service, Crater Lake Park Co., Contract, 1948.

56. *Annual Report of the Director of the National Park Service, 1949, Reprinted from the Annual Report of the Secretary of the Interior, 1949*, pp. 331-32. Although the only documented freezing of the lake occurred in 1949 there were unconfirmed reports of this phenomena in 1925, 1928, and 1930.

57. See, for instance, John Gribble, "Reader's Choice," *Travel*, C (July, 1953), 41, and "Crater Lake Holiday," *Sunset*, CXVI (March, 1956), 43-44, and Annual Report, Crater Lake National Park, 1953, Files, Superintendent's Office, Crater Lake National Park. For a complete listing of visitor opportunities and services in the park during the early 1950s see George C. Ruhle, *Along Crater Lake Highways: A Road Guide to Crater Lake National Park*. (Published by Crater Lake Natural History Association, 1953).

58. U.S. Department of the Interior, National Park Service, *Vaction Survey, Rogue River Basin, Crater Lake National Park, Oregon Caves National Monument*, [1950], pp. 4-17. As a result of this and other surveys, the Park Service closed the east entrance road in June 1956 because its limited use made road maintenance and operation of an entrance station uneconomical. A section of this road within the park from Rim Drive to Lost Creek Campground and the Pinnacles was to be maintained as a spur road off Rim Drive. National Park Service, Crater Lake National Park, Information for the Press, "East Entrance Road Closure," June, 1956, RG 79, 67A863, Box 9, File D-30, Roads and Trails, FRC, Seattle.

59. Annual Report, Crater Lake National Park, 1950, Files, Superintendent's Office, Crater Lake National Park. During 1950-51 three other projects relating to park concessions were completed at Park Service insistence: installation of an automatic electric-powered pump at the Museum Spring pump house to keep the Garfield Peak reservoir filled to capacity; installation of a new sewer line from the lodge laundry to a new sewage disposal filtration tank; and replacement of two existing transformers in the lodge basement with non-flammable oil so as to remove the existing fire hazard.

60. Annual Report, Crater Lake National Park, 1951, Files, Superintendents Office, Crater Lake National Park.

61. *Annual Report of the Director of the National Park Service, 1959, Reprinted from the Annual Report of the Secretary of the Interior, 1959*, p. 356; Area Management Survey Team to Regional Director, Region Four, June 16, 1958, RG 79, 67A863, Box 9, File A6423, Management Survey, FRC, Seattle; *Portland Journal*, March 29, 1954; and *Medford Mail Tribune*, August 25, 1957.

62. Annual Report, Crater Lake National Park, 1960, RG 79, Box 13, 46973, File A2621, Annual Reports (Misc.), FRC, Seattle. During 1959-60 local Congressman Charles O. Porter began a campaign to build a chairlift or cableway carrying gondola cars from the rim to the shore of Crater Lake. The effort, which was opposed by the National Park Service, aroused considerable debate in the local press with most newspapers supporting the Park Service.

63. Memorandum, Superintendent, Crater Lake to Director, July 13, 1960, RG 79, 68A45, Box 11, File W22, Final Opinions and Orders, FRC, Seattle, and *Portland Oregonian*, August 13, 1961.

64. Annual Report, Crater Lake National Park, 1963, RG 79, 46953, File A2621, Annual Reports (Misc.), FRC, Seattle. Examples of periodical articles were Andrew Flink, "California's Crater Lake", *Desert Magazine*, XXXI (September, 1968), 6-7, and "Side Trips Around Crater Lake," *Sunset*, CXLIII (August, 1969), 36-37.

65. Master Plan of Crater Lake National Park, July 1964, Chapter 1, Basic Information, The Visitor, pp. 1-8, National Park Service Historical Collection, Harpers Ferry Center.

66. "Crater Lake National Park, Management Objectives," Approved June 10, 1970, United States Department of the Interior, National Park Service, Crater Lake National Park, Facts and Figures [1974], "Nostalgia" Notebook, Library Collection, Crater Lake National Park.

67. U.S. Department of the Interior, National Park Service, *Crater Lake National Park, Oregon, 1965* (Washington, 1965), pp. 1-31.

68. The long-felt need for better fire protection in the lodge is discussed in Superintendent, Crater Lake to Regional Director, Western Region, December 20, 1965, RG 79, A7631, FRC, Seattle.

69. Hummel to Hauptli, June 28, 1968, RG 79, A13179, Box 2, File No. 13619, FRC, Seattle. The concessioner also agreed to streamline its operations to overcome a series of allegations relating to its inefficient services. See, for example, various complaints concerning park concessions in RG 79, 46953, Box 13, File A3619, FRC, Seattle.

70. *Salem Capital Journal*, January 15, 1968; "$2 Million Expansion to Add Facilities at Crater Lake National Park Complex," *Grow With Oregon*,

February 1968, 2; and "Statement for Management, Crater Lake National Park," November 8, 1977, in U.S. Department of the Interior, National Park Service, *General Management Plan, Crater Lake National Park, Oregon*, December, 1977, 1-6.

71. "Statement for Management, Crater Lake National Park," August 1986, Central Files, Crater Lake National Park.

72. U.S. Department of the Interior, National Park Service, Denver Service Center, *Draft Visitor Use Plan, Crater Lake National Park, Oregon*, July, 1977, pp. 8, 10, 12. The park also had eleven picnic areas which were frequented by park visitors.

73. *Portland Oregonian*, November 10, 1978, and "Statement for Management, Crater Lake National Park," November 8, 1977, in U.S. Department of the Interior, National Park Service, *General Management Plan, Crater Lake National Park, Oregon*, December, 1977, 1-6. Various environmental groups, among them Friends of the Earth, opposed the sale of the park concession to the Canteen Company of Oregon because of TWA's role in pressuring the Park Service into reversing a recent decision calling for the removal of unneeded overnight accommodations from Zion and Bryce Canyon national parks. Chuck Williams, National Parks Representative, Friends of the Earth, Washington, D.C., "Additional Note to 'New House Report Criticizes National Parks Concessions,' Concessioners Lobby Senate," March 26, 1976, Friends of the Earth, Northwest Office, Oregon Files, Crater Lake, Box 2, Manuscripts Collection, Henry Suzallo Library, University of Washington, Seattle.

74. Two articles which provide data on the controversy surrounding the lodge during the 1980s are Kimber Craine, "Decaying Crater Lake Lodge Sparks Restoration Battle," *National Parks*, LVIII (November-December, 1984), 34, and Gail Wells, "Jewel in the Rough," *Oregon Magazine*, XVI (December 1986 - January 1987), 72-73.

75. U.S. Department of the Interior, National Park Service, *Crater Lake National Park Statement for Management*, October 1986.

76. U.S. Department of the Interior, National Park Service, *Interim Development Concept Plan, Amendment to the General Management Plan, Crater Lake National Park, Oregon*, April 1985, pp. 1-6.

CHAPTER SIXTEEN
INTERPRETATION IN CRATER LAKE NATIONAL PARK: 1916-PRESENT

While Crater Lake National Park did not provide organized interpretive or educational activities until 1926, some efforts were made in the early 1920s to provide visitors with information on the natural history of the park. In 1922, for instance, Superintendent Sparrow observed that an "ever-increasing interest in nature studies is manifested by visitors to the park, and a book on the botany of the park, giving descriptions and illustrations that would enable the layman, as well as scientific botanists, to identify the various flowers and trees, is in demand."[1]

In 1924 Superintendent Thomson made provision for the University of Oregon to assign F. Lyle Wynd, a 22-year-old student, to conduct nature studies at Crater Lake. He initiated "a study of willows as to the availability of feed for ruminants" in the various valleys of the park. Besides conducting the study in 1924 and 1925 Wynd served, according to Thomson, as a "flunkey," becoming generally acquainted with the park flora, fauna, and geology.[2]

Organized interpretive activities, or educational/naturalist services as they were first called, were commenced at Crater Lake National Park during the summer of 1926. At the request of Ansel Hall, chief naturalist of the National Park Service, Dr. Loye Miller, an eminent naturalist from the University of California, organized such services which extended from July 1 to August 15. Miller, who had helped initiate an educational program at Yosemite, was appointed as acting park naturalist. He was assisted at Crater Lake by his son Alden H. Miller and two students, Leigh M. Larson and Ruth Randall, the latter two acting as volunteers in charge of wildflower displays. Some years later Miller would reminisce humorously about his early experiences at Crater Lake:

> Just as had been the case at Yosemite, we were appointed as rangers. My duties at Crater Lake included Nature Guiding, directing traffic, comforting crying babies, rounding up stray dogs, and a wild drive down the mountain to Medford Hospital with a writhing appendicitis patient and his distracted wife in the rear seat.[3]

The embryonic naturalist staff was stationed in Rim Village with headquarters in the Community House. In addition to manning the visitor information desk in that building the staff prepared a series of exhibits, including a fifty-specimen bird collection, a small rock collection, and a plant display featuring thirty species of wildflowers and six conifers. The staff also began printing "Park Nature Notes" for distribution to park visitors.

During 1926 the staff headed by Miller made personal contacts with more than 6,000 visitors. Nightly lectures (except Sunday) were given at Crater Lake Lodge and the Community House on such subjects as the geologic history of the Cascade Range, formation of Mt. Mazama and Crater Lake, glacial action in the park, geology of Llao Rock, history of Wizard Island, forest trees and diseases, flora and fauna of the area, and lantern slides of the Cascades and Crater Lake. Daily guided "field excursions" (except Monday) began at the Community House and went on various routes: both directions along the rim; through the meadows toward Government Camp; along the old road east of the lodge leading toward Government Camp; and through the forest back of the Community House.[4]

The Nature Guide Service, as it came to be called, was continued by Miller in 1927. He was assisted by his son, who was promoted to temporary ranger naturalist, and Leigh Merriam-Larson, a volunteer assistant. That year Superintendent Thomson reported:

> This work is, beyond question, the most popular and worthwhile service ever accomplished at Crater Lake, and I am hopeful of seeing its usefulness expanded by more adequate personnel and at least some minor equipment.

The naturalist program remained much as it had the previous year except that daily field excursions were commenced at the lodge to promote greater visitor participation.[5]

During 1927 initial discussions were held concerning establishment of an observation point on the rim of the lake that would serve educational purposes. Those participating in the discussions were Superintendent Thomson, Miller, and Dr. J.C. Merriam, president of the Carnegie Institution of Washington. Miller recommended that the observation point or station "should be architecturally in harmony with the adjacent landscape" and located "at Victor Rock or at some other strategic point near by." The station should be educational, inspirational, and informative and "should utilize the unique features of the park in such way that they would convey their own message with a minimum of assistance from simply worded statements." The "matters presented should be few" and "mainly geological in nature." Such points should include: Llao Rock, Wizard Island, Devil's Backbone, Dutton Cliff, Feeder Dikes (with telescope), glacial valleys, and the Cascade Range with its studding cones. The idea of time "should be stressed to emphasize the fact that the present is a result of continuous processes that are still in action." The geological processes were "intimately related with the biologic," and thus flora and fauna issues should be given attention at the station. Research and field data collection should be conducted by authorities in the field, and provision should be made for the periodic residence of such experts in the park. These discussions set the stage for the eventual construction of the Sinnott Memorial in 1931.[6]

Meanwhile the park educational program in 1928 was placed in charge of Acting Park Naturalist Earl V. Homuth, a professor of biology at the University of California, San Diego. The summer activities, which extended from July 1 to August 22, included:

Field Trips -- 38 (attendance 590)
Lectures -- 76 (attendance 4,880)
Contacts (Rim, Lodge, Community House) -- over 5,000

Three issues of 100 copies each of "Nature Notes" were printed to supplement the lectures and guided field trips.[7]

In 1929 the park information department, as it was referred to, was again in charge of Acting Park Naturalist Homuth, assisted by one temporary ranger naturalist and two volunteer assistants. Some 65,000 free government leaflets were distributed at the information office and temporary museum in the Community House and park ranger stations during the summer. The leaflets had been prepared by Homuth and his staff and covered topics such as geology, wildlife, and natural history in the park. Two lectures were given each evening, one at the temporary museum and one at the lodge. A total of 94 lectures were given to some 11,235 park visitors. In addition some 53 guided tours were conducted daily "over areas about the rim," a total of fifty such trips being made during the summer with an attendance of 1,277.

A natural wildflower garden named Castle Crest Garden was established near Government Camp in 1929. Some 200 species of park flowers were planted in the garden, and regularly scheduled tours were conducted through it. Metal labels were placed along the trail to identify the various plants. In addition a labelled nature trail was established along the rim from the lodge to a new lookout point some 1.3 miles westward.[8]

During the summer of 1929 a "Plan of Administration of the Educational Activities of Crater Lake National Park" was prepared by NPS Chief Naturalist Ansel F. Hall, Acting Park Naturalist Earl V. Homuth, and Superintendent Solinsky. The plan, which was approved by NPS Director Albright on August 10, included a brief statement of the principles of current operation which was to serve as an informative guide for the immediate use of the park educational staff and as a basis for developing a long-range administrative program to govern the expanding park educational program. The plan was based on the previous years' experience of the park educational staff as well as the insights gained by the staffs of other parks where educational activities had been developed more completely.

The plan outlined the staffing requirements for the park educational program. It called for the hiring of a permanent year-round park naturalist to administer the program as soon as possible. The existing staff consisted of an acting park naturalist (temporary summer appointment), two ranger naturalists (temporary summer appointments), and one volunteer assistant. The educational staff would continue to have its offices in Community House.

The responsibilities of persons serving in these positions were outlined in the plan. Aside from administering the park educational program the major duties of the park naturalist were to include museum and library development, writing and editing park publications, compilation of scientific research data on the park, and arrangement for special services to park visitors.

The ranger naturalists were chosen for their training in the natural sciences and their ability to present information to the public. Their duties included conducting field trips, delivering lectures, dispensing information, and serving in the park museum. Provision was made for employment of volunteer assistants to conduct special studies and undertake other projects in support of the park's educational activities.

The plan detailed the level of existing educational activities for the public at Crater Lake. There were four guided field trips: Watchman Trail (1½ hours), Trail to Lake Shore (2½ hours), Garfield Peak (3 hours), and Bell Canyon (2½ hours). Lectures were presented at the Community House and Crater Lake Lodge each night except Sunday. The museum and general information office at the Community House was open daily from 9 a.m. to 10 p.m. Rim information service was provided daily (noon to 5 p.m.) by a ranger naturalist. Other educational activities included maintenance of the wildflower garden and the sale and distribution of park publications.

In addition the plan listed six new permanent projects which would form the nucleus of park educational efforts during the next several years. These were:

1. Collection and installation of exhibits in the museum.
2. Installation of view finders, exhibits, and information data in lookout stations at Victor Rock and on Watchman Trail.
3. Labeling and maintenance of nature trails--Rim Trail, Trail to Lake, Bell Canyon Trail to Wild Flower Garden, and Garfield Trail.
4. Development, labeling, and maintenance of wildflower gardens--Castle Crest Garden and Rim Garden.
5. Educational staff publications--Nature Notes (monthly), Natural History Leaflets, Park Manual of Information (cumulative), and Manual of Instruction for Educational Workers.
6. Establishment and maintenance of a park library.[9]

The position of park naturalist was made permanent by the 1931 fiscal year appropriation act. Homuth, who had served as acting park naturalist on a seasonal basis since 1928, was named to fill that position.[10] Because of illness, however, he was forced to resign suddenly in July 1930. F. Lyle Wynd, ranger naturalist, was appointed to assume temporary charge of the park's educational activities. In an effort to help the fledgling program Dr. Harold C. Bryant, assistant NPS director for educational activities, visited the park that summer.

Increasing numbers of visitors participated in the park educational programs during 1930. Some 107 evening lectures were presented to 10,310 people at the lodge and Community House. The lectures at the latter were illustrated with lantern slides and moving pictures. Some 2,330 persons participated in 112 field trips, two of which were taken to various sections of the park each day.

The building formerly occupied by Kiser's Studio at the rim was converted for use as a visitor contact/information station in 1930. The structure, which became generally referred to as the Information Building, had been sold to the Crater Lake National Park Company, and the park concessioner agreed to permit government use of the structure without remuneration. It was estimated that about 90 percent of the park visitors came into contact with the park naturalist staff at this facility. Sales of government publications increased markedly during the year, the number of National Park Portfolios sold, for instance, rising from 54 to 1,000. Some 2,000 copies of the park "Nature Notes" were distributed.[11]

The Crater Lake National Park educational program was greatly expanded during the summer of 1931. Setting the philosophical basis for the program was a "Memorandum Regarding Relation of Aesthetic to Scientific Study in an Educational Program at Crater Lake," prepared by John C. Merriam, president of the Carnegie Institution of Washington on June 14, 1931. In the memorandum Merriam discussed four features of nature appreciation which were incorporated in the park's educational program. These aspects were:

> 1. Elements of special human appeal of the personal type. Included in this group are many features associated with joys or sorrows of previous life, also factors which have favorable influences on the individual through stimulation to activity or through influences bringing rest or relief.
>
> 2. That which has appeal to the sense of beauty or proportion as it is interpreted by the artist, and with the minimum of expression of purely individual personal appeal. The color sense, symmetry, balance, contrast, and unity in the pattern of nature sum up much of what would be included.
>
> 3. Features that force upon our attention recognition of magnitude, power, majesty, and law in nature. These aspects of nature produce a feeling of awe which may in one direction become fear or in another may be the basis of reverence.
>
> 4. Recognition of that which lies behind the superficial features, represented in the moving element through which the picture has been produced. These factors may be transmuted into what has been referred to as natural law. This type of appreciation means seeing nature as a living, moving, growing thing. . . .[12]

The growing educational program was centered around the projected Nicholas J. Sinnott Memorial Observation Station and Museum that was to be built with a $10,000 appropriation made by Congress on July 1, 1930. Sinnott, who had died in 1929, had been a member of the House of Representatives from Oregon during 1913-28 and as chairman of the Committee on Public Lands from 1919-29 had been a strong supporter of Crater Lake National Park. In providing for the memorial Congress acted upon the recommendation of Louis C. Cramton, chairman of the subcommittee of the House Appropriations Committee handling Interior Department appropriations. The Sinnott Memorial is significant since it was the first museum building to be constructed in a national park with funds provided by a specific congressional appropriation.

Construction of the Sinnott Memorial, located on Victor Rock, was commenced during the fall of 1930. Plans for the structure were developed by Chief Landscape Architect Thomas C. Vint and Assistant Landscape Architect Merel S. Sager of the NPS Landscape Division and approved by the NPS Educational Division and John C. Merriam, who had become chairman of the Secretary of the Interior's Advisory Committee. Through the cooperation of the Carnegie Institution of Washington, the sum of $5,000 was made available for placement of exhibits and telescopes in the memorial. The Carnegie funds were transmitted through the National Academy of Sciences, which appointed a committee headed by Merriam to cooperate with the Park Service in the installation of the equipment.[13]

The Sinnott Memorial was dedicated with special ceremonies on July 16, 1931. Donald B. Colton, a representative from Utah and chairman of the House Committee on Public Lands, gave the dedicatory speech. Colton had succeeded Sinnott as the chairman of the committee. Colton stressed the untiring efforts of Sinnott in interesting the national authorities in Crater Lake and obtaining for Oregon's national park funds with which improvements had been made. Among those attending the ceremonies were NPS Director Horace M. Albright, William G. Steel, and nine members of the Committee on Public Lands.[14]

During the summer of 1931 exhibits, emphasizing the beauty and scientific aspects of the Crater Lake story, were placed in the Sinnott Memorial. Nine exhibit boxes were sunk in the masonry of the parapet to interpret the park's principal themes:

1. Volcanoes of the Northwest
2. Why We Believe a Great Volcano Existed Here
3. Building Up of the Mountain
4. Glaciation
5. Destruction of the Mountain
6. Latest Volcanic Activity
7. Crater Lake
8. Beauty of Color
9. Beauty of Form

Between and outside of these boxes ten pairs of field glasses and two binocular telescopes (battery commander) were mounted in fixed position in order to tell the story of Crater Lake in a consecutive manner. Other installations placed in the memorial included a cast relief model of Crater Lake and vicinity which had been presented to the park earlier by the Crater Lake Company, exhibits related to experiments to determine the color of the lake's water and the color of light transmitted through the water, a small stand to be used by visitors to identify color, color harmony, and landscape composition, and a charred cross-section of a three-foot log of Western yellow pine which had been found buried beneath some 60 feet of ash at a road excavation some ten miles southwest of the rim.

During 1931 new educational activities were integrated with the observation, information, and lecture services at the Sinnott Memorial. The expanded activities were developed under the direction of the new park naturalist, Donald S. Libbey, and Ansel F. Hall, NPS Senior Naturalist and Forester.[15] A Naturalist Guided Automobile Tour was inaugurated. The tour consisted of a twenty-minute lecture on the geological history of Crater Lake followed by a directed 16-stop, three-hour circuit around the rim of the lake. Beginning on July 17 a program of four alternative lake boat rides was offered, ranging from a full day to approximately three hours under the title "Trips on Crater Lake with the Ranger-Naturalists." Plans were developed for the printing of three leaflets to serve as guides for the parapet views at the memorial and the auto and lake trips.[16]

Park educational activities were placed under what was referred to as the Research and Educational Department in 1932. Libbey expanded the program with the assistance of three seasonal ranger-naturalists. It was necessary to assign individuals from the regular ranger personnel to assist in the work since there was an increase of more than 100 percent in educational contacts compared to 1931. Total contacts were reported to be 49,206 or 44.8 percent of the total visitors. Some 342 lectures with 6,971 persons in attendance were given along the parapet of the Sinnott Memorial. Park personnel participated in 22 radio broadcasts on the lone Medford radio station and gave two lectures outside the park, thus increasing public awareness of park activities.

Nightly lectures and daily field trips continued to be the mainstays of the park educational program. Chalk talks were introduced as an added feature of the lectures. The most popular field trip, according to Superintendent Solinsky, was the "conducted rim caravan tour." Some 82 auto tours were conducted with a total of 365 cars and 1,276 persons participating. A new field trip was added to the program schedule, consisting of a 3½-hour hike around the rim to the foot of Watchman Peak with a climb up the new Watchman Trail to the Watchman Lookout, a new structure housing forest protection exhibits.

During 1932 a number of individuals visited the park to aid the development of the park research and educational program. These included: Dr. Harold C. Bryant, NPS assistant director; Earl E. Trager, Branch of Research and Education; Verne E. Chatelain, historian, Washington Office; John C. Merriam, president, Carnegie Institution of

Washington; Worth Ryder, University of California, Berkeley; and a committee of five with Dr. C.V. Boyer as chairman from the University of Oregon.[17]

Visits such as these continued to be made during 1933 and 1934. As a result several studies were prepared that analyzed the educational program in terms of the visitors' experiences in the park. A study was undertaken to examine the park's scientific features to develop an integrated program whereby visitors to Crater Lake could be brought into contact with both the aesthetic and scientific features of the park environment. The most significant study to result from such efforts was prepared on May 1, 1934, sponsored jointly by the Carnegie Corporation of New York and the University of Oregon. It was entitled, "Preliminary Report on the Crater Lake Project: A Study of Appreciation of Nature Beauty."[18]

Park Naturalist Libbey was furloughed from the park staff in November 1933 to serve in the Emergency Conservation Work (ECW) program. For some three years that position was filled by temporary assignments. While the summer program continued, Superintendent Canfield observed that "development common to most parks as a result of emergency monies and technical assistants" was lost at Crater Lake "due to the absence of a year round head."

Despite the lack of a full-time year-round park naturalist, Crater Lake continued to attract highly qualified seasonal naturalists from across the nation. Active searches were conducted to bring academically trained experts in various fields of science to the park each summer. In 1934, for instance, the seasonal ranger-naturalist staff consisted of the following:

E.I. APPLEGATE, BOTANY
Acting Curator, Dudley Herbarium, Stanford University

J.S. BRODE, WATER BIOLOGY
Instructor, Santa Monica Junior College

B. CAMPBELL, ECOLOGY
Graduate Student, Johns Hopkins Medical School

R. HENDERSON, PROGRAMS
Instructor, Secondary Schools, Medford, Oregon

E.G. MOLL, AESTHETIC INTERPRETATION
Professor of English, University of Oregon

W.D. SMITH, PH. D., GEOLOGY
Professor of Geology, University of Oregon

C.R. SWARTZLOW, PH. D., GEOLOGY
Instructor of Geology, University of Missouri

W.C. THOMAS, ZOOLOGY
Graduate Student, University of Southern California

H.H. WAESCHE, GEOLOGY
Instructor of Geology, Virginia Polytechnic Institute

Following the 1934 tourist season Acting Park Naturalist Warren G. Moody prepared a "Ranger-Naturalist Temporary Manual of Operation" to aid the park educational program. The manual was designed to provide seasonal personnel with data that had been used in various programs and guided tours. Included in the manual were sections dealing with Garfield Peak, Special Boat Trip, Wizard Island, Rim Caravan, Sinnott Memorial, and Community House.[19]

Facilities for the park educational activities posed problems for administrators during the mid-1930s. The Sinnott Memorial was used each summer, but "leaks in the roof and lack of funds to complete and improve the original construction prevented completion of the interior of the building as originally planned." The Community House was "partially broken in and badly wracked from heavy winter snows" in 1935 and was considered to be "unsafe." Nevertheless, it continued to be used for evening programs and a temporary museum.[20]

Research in support of park educational activities became a significant component of the Crater Lake program during the mid-1930s.

Botanical research for the classification of plants and flowers was conducted by Dr. Elmer I. Applegate, a nationally recognized authority and acting curator of the Dudley Herbarium at Stanford University who was hired on a temporary basis for several summers. He developed a checklist of 550 species of plants, flowers, shrubs, and trees and conducted a study of the trends of vegetation succession in the park. Ornithological studies were carried out by Drs. L.H. and A.H. Miller of the University of California, Los Angeles and Santa Barbara, respectively. Fresh water life research projects were conducted in relation to the species of plants and organisms in the lake. Geological research was performed by Dr. Howel Williams, professor of geology at the University of California, under the sponsorship of the Carnegie Institution of Washington. The Carnegie Institution also supported research by Dr. Edison Pettit and the Mt. Wilson Observatory as to the scientific explanation for the blueness of the lake's water. Other research topics conducted by the ranger-naturalist staff included Mt. Mazama, caves and waterfalls, physiography, lake ecology, rodents, aesthetics, and place names.[21]

The various studies resulted in a number of publications. Examples of articles that appeared in scientific journals were Warren D. Smith and Carl R. Swartzlow, "Mount Mazama: Explosion versus Collapse," Bulletin of Geological Society of America, XLVII (December, 1936), and F. Lyle Wynd, "The Floral Wealth of Crater Lake," Natural History (June, 1937). In 1941 Howel Williams published Crater Lake: The Story of Its Origin, a book that has since gone through several revised editions.

In 1936 John E. Doerr, Jr., was transferred from Hawaii Volcanoes National Park to Crater Lake as permanent full-time park naturalist, and under his direction the educational activities of the park took on new life. A graduate of the University of Wisconsin with undergraduate and graduate degrees in geology, he had been associate park naturalist at Hawaii since May 1931. During 1936-37 progress was made on the interior museum room of the Sinnott Memorial as well as on new forest protection exhibits at the Watchman Lookout. An exhibit layout plan for the interior museum room in the Sinnott Memorial was prepared by Ansel F. Hall on April 6, 1937. The theme for the displays was "Interpretation of the Beauty of Crater Lake and its Surroundings," thus putting into effect the general principles expressed earlier by Dr. John C. Merriam.[22]

Under Doerr's leadership planning was initiated in 1936 for a "complete museum development." Plans were tentatively formulated for a new central museum building, trailside and roadside exhibits, nature trails, and view finders. The Community House remained in unstable condition, and Superintendent Canfield observed that "anticipation" for a new central museum building was growing, "nourishing a hope that it will come into existence before the Community House falls down from old age and burden of heavy snow in winter."[23]

The interpretive program at Crater Lake continued to expand in 1938 under the leadership of Doerr. The two objectives of the program were "to render a superior quality of interpretive service to the public, and to carry on careful scientific research which would add to the knowledge of the natural features of the park." The public contact activities of Doerr and his staff of seven temporary ranger-naturalists included from 4 to 10 lectures daily at the Sinnott Memorial, Community House, and lodge as well as occasional lectures at CCC camps and area service clubs. Other daily activities included three to five guided trips, the launch trip around the lake, and information service at three points in the rim area. One new auto caravan trip along the west rim and the fire lookout station on the summit of the Watchman were commenced, emphasizing scenic and scientific values and forest protection. Another new guided trip initiated during the summer was a camera tour conducted by Ranger-Naturalist Elmer C. Aldrich. In July the interior room and exhibits at the Sinnott Memorial were finally opened to the public.

All told the naturalist staff contacted 136,320 persons in 1938, which was approximately two-thirds of the total park visitation. These contacts constituted an increase of more than 20,000 over the number for the previous year.

The expanded park research program in 1938 included botanical, zoological, limnological, geological, historical, museum, and photographic studies. Applegate continued his botanical studies and increased the park's check list of species to 570. Dr. R.R. Huestis, ranger-naturalist, conducted systematic studies of Peromysous and mammals on Wizard Island and made additions and corrections to the park's check list of birds. Limnological research was conducted by Dr. Arthur D. Hasler with the objective of establishing "a sound fish planting policy" which would "assure good fishing in the lake." Geological research continued under the direction of Dr. Howel Williams. Historical research on the park was conducted by Doerr, preparing notes on the history of the lake from its discovery in 1853 to its establishment as a national park for use on an "America's Hours of Destiny" radio program on the history of the park. In addition Doerr took a two-month trip, visiting museums in large eastern and midwestern cities and discussing with artists and scientists methods of interpreting scenic beauty. Photographic studies were begun with the purpose of examining the interpretation of scenic beauty. In commenting on recent research in the park Doerr observed:

> Recent research accomplished and in progress has been and is being done by the naturalist staff, consisting of a permanent naturalist and seven temporary naturalists employed during the summer months; a wildlife ranger; various technicians of the National Park Service; and Dr. Howel Williams of the University of California. The research activities have been almost entirely of a field nature, there being no facilities for laboratory work other than mere office equipment, and some laboratory apparatus borrowed from various institutions. A number of the men carrying on summer field work have had during winter months the use of laboratories and other facilities at various universities and institutions, thus they have been and are continuing to carry on laboratory work in connection with problems at Crater Lake.[24]

When Lava Beds and Oregon Caves were placed under the administration of Crater Lake in 1939 the duties of the park naturalist and his staff of seven summer ranger-naturalists were greatly expanded. The park's annual report for that year indicated that public contact activities at Crater Lake by the naturalist staff included two to ten lectures daily; guided trips, and information service from June 1 to October 15. During the winter months the park naturalist's office was in Medford "from where he made numerous public contacts with school groups, service clubs, carried on field studies and planning of developments in the three areas, handled publicity, carried on research, and assisted the superintendent in the preparation of numerous reports." The "outstanding aspect" of the interpretive activities, according to Superintendent Leavitt, was "the expansion of the program emphasizing Crater Lake as a blend of scenic and scientific values." A new art exhibit at the Sinnott Memorial had contributed to this emphasis.[25]

The park interpretive program continued to be active prior to World War II. In August 1940 Doerr was transferred to Rocky Mountain National Park as assistant superintendent. He was replaced by George C. Ruhle who would direct the interpretive program at Crater Lake until 1953. Thus, the park naturalist staff for 1940 and 1941 consisted of one permanent and eight part-time positions. During those years research sponsored by Dr. John C. Merriam with cooperation from the staff of the University of Oregon was conducted in the park, involving studies in archeology, geology, biology, climatology, and nature appreciation. The research was designed to "eventually become a part of the naturalist program."[26]

Statistical breakdowns of the interpretive program for 1940 and 1941 indicate that more than half of the park visitors were contacted by the naturalist staff. In 1940 there were 133,315 total contacts out of a total visitation of 236,999. The following year the comparative figures were 129,610 and 254,754, respectively. The statistics for interpretive services were:

	Number		Attendance	
	1940	1941	1940	1941
Guided trips	188	182	3,324	3,007
Lectures	588	519	30,483	36,596
Attended stations	3	3	97,939	86,062
Unattended stations	3	3	1,569	3,945 [27]

In June 1941 an Advisory Committee on Educational Problems of Parks in Oregon was organized at the University of Oregon under the joint sponsorship of Dr. John C. Merriam and the State Board of Higher Education. The committee consisted of a number of distinguished men from the academic community:

Honorary Chairman: Dr. John C. Merriam
Chairman: Dr. R.W. Leighton, Dean, School of Physical Education, University of Oregon
Dr. Ira S. Allison, Oregon State College
Dr. John P. Buwalda, California Institute of Technology
Dr. L.S. Cressman, Chairman, Anthropology Department, University of Oregon
Dr. E.L. Packard, Chairman, Geology Department, Oregon State College, and Director, Research for the System
Dr. George C. Ruhle, Naturalist, Crater Lake National Park
Dr. Warren D. Smith, Chairman, Geography and Geology Departments, University of Oregon
Dr. Howel Williams, University of California

The purpose of the committee was to promote continuing scientific study of Crater Lake, emphasizing geological, climatological, archeological, and paleontological contributions. The results of the research would be used for park interpretive programs and be published for the information of the public.[28]

Before wartime cutbacks virtually brought the park interpretive program to a standstill, the first ranger-naturalist school was held in July 1942. The three-day program included training in the purposes, activities, and methods of the park naturalist/interpretive program, care and use of government property, research, museum plans, forest and building fire protection, law enforcement, and civilian defense. In the postwar years annual naturalist training would be combined with the regular ranger school.[29]

Another event occurred at Crater Lake in 1942 that would influence the park interpretive program in the postwar years. Culminating nearly twenty years of discussion the Crater Lake Natural History Association was formally organized on June 20 by 59 individuals to promote the interpretive program and interests of the park. As early as 1923 Superintendent Thomson discussed the possibility of organizing an advisory council of seven to nine persons to promote the interests of the park. He had in mind a committee composed of outstanding persons from surrounding communities, Portland, the Mazamas, and the Women's State Federation. Such a committee would help formulate plans, keep abreast of present and future needs, and study legislation relating to the park. Thomson received little encouragement from the Washington Office, however, and the advisory council was never established.[30]

Despite the setback to Thomson's plans the idea of an outside advisory group for the park continued to be discussed. During the late 1930s Superintendent Leavitt and Park Naturalist Ruhle initiated an effort to form a group that would promote the park interpretive program. Their efforts resulted in establishment of the association on June 20, 1942, and approval of the group's constitution by the Department of the Interior on July 25. The constitution of the nonprofit scientific and historical society listed nine objectives:

> 1. In cooperation with the National Park Service, to further interest in the scientific investigation and interpretation of the natural features of Crater Lake National Park, Oregon Caves National Monument, and Lava Beds National Monument, in the fields of geology, history, biology, anthropology, forestry, botany, and the natural sciencies.
>
> 2. To further development of museums and exhibits, to establish and help support libraries of historical, scientific, and popular interest, to provide adequate library service, and to assist in the accumulation, care, and fitting use of a collection of aids to visual education and study for the three areas named above.
>
> 3. To promote the general educational and interpretive programs of all three areas.
>
> 4. To sell non-Government publications to visitors.

5. To assist in the production, publication, and distribution of Nature Notes and other publications.

6. To study living conditions past and present of the Indians of the region, to encourage their arts and crafts, and to perpetuate their structures, customs, traditions, legends, etc.

7. To further scientific investigations along lines of greatest public interest and to publish bulletins of a non-technical nature from time to time.

8. To assist in the administration, protection, maintenance, operation, and improvement of the three areas by such means as may be practicable.

9. To limit strictly the operations, business, property, and assets of the Association to the purposes named above, so that the Association itself shall not be operated for profit, and so that no part of the net income of the Association shall inure to the financial benefit of any person connected therewith.

Despite the enthusiasm of the group, however, World War II prevented the organization from initiating activities until 1946.[31]

Wartime cutbacks brought the park interpretive program to a standstill beginning in late 1942. During fiscal year 1943 all eight of the seasonal ranger-naturalist positions were abolished for the remainder of the war. The park naturalist found himself assigned to trail repairs and other necessary park maintenance work.[32]

When the park reopened on a year-round basis in 1946 organized naturalist services were resumed under the direction of Park Naturalist Ruhle. A staff of eight seasonal ranger-naturalists, three of whom had served previously at Crater Lake, were hired for the summer. To ensure the continuing professionalism of the program a ranger-naturalist school was held in the park during June 23-27--the first such school since 1942. Among the topics covered on the program were (1) purposes, activities, and methods of the naturalist service; (2) relationship of the naturalist service to the park; (3) research and special assignments; (4) collateral reading and collections; (5) uniforms, responsibilities, reports, and schedules; (6) small fire suppression; (7) building fire protection; (8) history of the National Park Service; (9) park and ranger organization; and (10) law enforcement.[33]

The interpretive program in the park during the summer of 1946 was similar to that of the prewar years. Evening lectures were presented at the lodge and Community House. Two geology lectures were scheduled daily at the Sinnott Memorial, and four self-guiding trails--Garfield Peak, Castle Crest Wildflower Garden, Lake Trail, and Lake Rim--were opened and supplied with botanical labels. Twice-daily guided boat trips around the lake were commenced as was a daily guided automobile rim caravan tour and 3½-hour hike along the rim. A wildflower exhibit, displays of rock, tree, and plant specimens, and historical and artistic photographs were featured in the Information Building. Research efforts were also resumed, the principal projects conducted being fish studies by Dr. D.S. Farner of the University of Kansas and preparation of study skins of small park animals and birds by Dr. R.R. Huestis.[34]

The Crater Lake Natural History Association began its first activities in the park during the summer of 1946. The efforts of the association included the sale of government and private publications, printing of "Nature Notes" (vol. XII), and sponsorship of two lectures at the Rangers' Dormitory for park and association personnel and two lectures at Community House for the general public.[35]

Although the draft of a park museum prospectus had been prepared in 1942 the document received little attention until June 1947 when Ruhle reviewed and updated it. The revised prospectus contained a section regarding the buildings which were used to house the disparate elements of the interpretive program. The document read:

> In 1930-1931 Sinnott Memorial was erected by authority of Congress in honor of Nicholas J. Sinnott (1870-1929), a member of Congress from Oregon. . . . In it [the general exhibit room] at present are displayed six colored, illuminated transparencies, a collection of framed photographs, and four

splendid original paintings of the lake by Chris Jurgensen, Gunnar Widfors, Eugene Kingman, and Eugen Neuhaus, respectively. The parapet, facing the lake, has a guard wall in which are sunk nine wells. Each well has an appropriate exhibit that explains features visible through accompanying mounted binoculars and view finders. The parapet platform bears a relief map of the park and a stand for folding chairs to accommodate audiences. Neither laboratory, office, nor living quarters are in the structure. . . . The station commands an especially significant view, so that the park visitor can orient himself and learn about the geology of the region. . . .

An Information Building on the Rim above Sinnott Memorial formerly housed the Kiser Photographic Studio. . . . It is used for dispensing information, for sale of literature, and for housing three small wall cases, an open display table for geological specimens, and a cabinet for display of cut flowers. The public crowd it for a warming room during the frequent inclement weather. . . .

The Community Building on the Rim was built of frame construction. . . . The building is in a very poor condition, so that it needs external props to keep it from collapse. In summer it is used for lectures and recreational purposes. In winter a crowd of wet, uncomfortable skiers seek its scant shelter from the elements, so that they can eat their lunches, or huddle around the fireplace in its dark maw. The building formerly contained temporary displays of various natures. . . .

In 1931 the two-storied Watchman Lookout was constructed of stone and glass on the summit of the Watchman. . . . There is room [on the first floor] for six wall cases 6 to 7 feet wide and 1 foot deep, and two narrow cases 2 feet wide. As planned in 1936, these cases were to hold exhibits pertaining respectively to the following:

1. Forests of Crater Lake National Park, Nature and Composition.
2. Forest Protection: Scope and General Management.
3. Insects Harmful to Forests.
4. Fungi and Other Plants Harmful to Forests.
5. Causes and Prevention of Forest Fires.
6. Detection of Forest Fires.
7. Fire Suppression.
8. Results of Forest Fires.

Since its erection, the Administration Building at Park Headquarters has furnished space adequate for administrative and operative needs of the Naturalist Division. Here are the office of the park naturalist, two rooms for laboratory work and study collections, a dark room, and two closets. A small park library is housed in the naturalist's office.

In 1942 a site at the junction of the approach roads from Medford and Klamath Falls had been chosen for the central park museum. The revised prospectus proposed construction of a museum building at an estimated cost of $320,000. The building would contain exhibit, community and lecture, dark, library, and office rooms as well as a warming station and ski hut room for winter use. The museum would include the park relief map, murals, paintings, and exhibits on geology, biology, prehistory, history, meteorology, flora, fauna, skiing and winter use, fire prevention and suppression, and aesthetics. In addition, Ruhle recommended two "trailside markers and exhibits-in-place" just north of Llao Rock and at the road cut through the Llao dacite flow, preparation of a pamphlet for motorists on Rim Drive, and improvements to the Sinnott Memorial.[36]

During the summer of 1947 the National Park Service cooperated with the University of Oregon in sponsoring a Crater Lake Field School of Nature Appreciation as part of the park's educational program. The director of the school was Dr. R.W. Leighton, chairman of the Advisory Board on Educational Problems of Parks in Oregon. The school, held from July 14 to August 16, offered opportunity for study for eight units of college credit in the field of nature study and appreciation. Instruction covered the geologic and physiographic features and flora and fauna of the Crater Lake region and emphasized "an interpretive understanding of the laws of nature and of their importance to man's understanding of his environment." The program was designed to be of service to teachers and others who worked with groups of young people or other age groups in nature study programs. Headquarters and living quarters for the 25 students of the school were located at the Union Creek Resort just outside the park. The school included extensive field trips in the park and surrounding region.[37]

During the postwar years Park Naturalist Ruhle undertook efforts to ensure the continuing professionalism of the ranger-naturalists at Crater Lake. In January 1948 Ruhle prepared a memorandum, entitled "Information on the Application for a Ranger Naturalist Position," that was approved by Superintendent Leavitt. According to the memorandum, applicants should be college graduates with sound training in natural history, particularly botany, zoology, and geology. This knowledge was to be coupled with enthusiasm, keen observation, ability to impart information, and ease in mixing spontaneously with park visitors. Resourcefulness and initiative were necessities since work must be done without close supervision. Ranger naturalists were to be in good physical condition since they were expected to aid in fire fighting and rescue work in emergencies. Research and specimen collection were encouraged, but such work was to be done outside scheduled work hours which consisted of five eight-hour days per week. Work schedules permitted little time for lecture preparation and study.[38]

During the 1950s the park interpretive program at Crater Lake continued to emphasize the activities that had been initiated both before and immediately after World War II.[39] In 1952 a recorded lecture synchronized with automatically projected slides was installed in the Information Building to improve park visitor orientation services.[40] The Crater Lake Natural History Association also continued its efforts to promote park interpretation, printing "Nature Notes," selling various publications, and sponsoring special studies such as "The Golden Mantled Ground Squirrel" by Dr. R.R. Huestis and "The Birds of Crater Lake" by Dr. Donald S. Farner in 1952.[41]

The draft museum prospectus prepared in 1947 underwent considerable discussion during the 1950s. Finally in October 1957 a museum prospectus for the park was approved. A new site was selected for the central museum which would also serve as a visitor and information center and the hub of naturalist activities, such as guided field trips, orientation talks, and lectures, on the rim. The site was near the entrance to the campground on the south side of the plaza near the junction of the approach roads from Medford and Klamath Falls. As contemplated the building would house an entrance lobby and reception room, two exhibit rooms, an auditorium with a seating capacity of 500, and space for office, exhibit preparation, and storage. The primary objective of the museum would be to impart to the visitor a conception of what Crater Lake signified by its aesthetic qualities and values as well as to demonstrate that behind its beauty lay a scientific story that provided meaning. The outline of exhibit content provided that the central theme would be geology supported by the subthemes of biology, history, prehistory, forest protection, and sequence of seasonal phenomena. Woven into all exhibits would be the idea of aesthetics. The prospectus recommended roadside exhibits for at least seventeen locations along park roads, most of them along Rim Drive, and some twenty roadside markers to point out sites of interest.[42]

Research continued to be emphasized as an adjunct to the park interpretive program during the late 1950s. One such study that resulted in a popular publication was Grant and Wenonah Sharpe's 101 Wildflowers of Crater Lake National Park in 1959.[43]

The U.S. Coast and Geodetic Survey conducted a hydrographic survey of Crater Lake in 1959. The data obtained by the survey was used to prepare a new map of the lake bottom, hence contributing to further understanding of the lake and enriching park interpretation. Measured from an assumed surface elevation of 6,176 feet, the greatest depth was found to be 1,932 feet, or 64 feet less than the depth of 1,996 feet recorded during the 1886 survey. Two submerged volcanic cones and other evidence of post-collapse volcanic activity were identified. Later in February 1961 the American Journal of Science published an article, "The Floor of Crater Lake, Oregon," by Dr. Howel Williams interpreting the survey.[44]

The Crater Lake interpretive program continued to suffer from inadequate facilities and staffing. In 1960, for instance, Superintendent Brown described the accomplishments and problems facing the program:

> The summer interpretive program was conducted from June 15 through September 15. The daily schedule of activities during the peak months of visitor use (July and August) included 3 evening talks, 2 launch trips on Crater Lake, 1 field trip,

> visitor contacts at the north junction viewpoint, and operation of 2 interpretive stations. The peak staff consisted of the chief park naturalist, assistant park naturalist, 12 seasonal interpreters, and 1 clerk-stenographer.
>
> A reasonable balance exists between personal services and self-guiding devices. However, both types of services need to be improved and expanded. We can gradually improve and expand on self-guiding devices and possibly meet the demand. Personal services and facilities for these services are more of a problem. Supervision and training of seasonal employees has not been adequate and probably will not be until another permanent interpreter is added to the staff.
>
> Facilities for personal services are sadly lacking. Sinnott Memorial Overlook was an outstanding interpretive station, but is now too small for present travel and is in need of rehabilitation. We have no visitor center; the exhibit building has only 360 square feet of space for information and interpretive services. More than 54,000 (14%) of park visitors were recorded during 1960. An adequate visitor center, in a good location, could be visited by over one-half of park visitors, including nearly all winter visitors who now receive no interpretive services.
>
> Considering the lack of facilities and the staffing needs, the interpretive program for Crater Lake appears satisfactory and is providing needed services so that the more interested visitors can receive the knowledge and other benefits they seek.

Brown went on to describe the multi-faceted components of the park interpretive program. Twelve routed plastic interpretive markers which had been placed along Rim Drive during 1959 were popular, according to Brown, and "contributed greatly to visitor facilities for self-guiding." Plans were underway for an additional seven routed plastic markers and one routed wood sign along the drive.

The Information Building, which had become known as the Exhibit Building, and the Sinnott Memorial served in dual capacities as interpretive and information stations, and both were attended by interpretive personnel from June 15 to September 15, 1959. At the Sinnott Memorial naturalists gave five twenty-minute talks daily on the geologic origin of Crater Lake. As time permitted a naturalist was stationed at the lake viewpoint near North Junction to provide information, this new activity resulting in some 2,500 visitor contacts. An information station was maintained in the Administration Building throughout the year, and the two park entrance stations dispensed information and Park Service brochures.

Many books, maps, and slides were sold by the Crater Lake Natural History Association at the Exhibit Building and the Administrative Building. Annual gross sales amounted to some $4,700.

Park study collections were maintained in the Administration Building. The herbarium was composed of more than 3,200 sheets of vascular plants, packets, bottles, and boxes of plant specimens. The zoological collection contained more than 700 specimens of mammals, birds, reptiles, and amphibians, plus several hundred invertebrates. An insect collection filled one cabinet, and the mineral and rock collection consisted of 82 specimens.

Museum exhibits were housed in the Exhibit and Administration buildings and the Sinnott Memorial. Simple displays on human and natural history were shown in the Exhibit Building, while the Sinnott Memorial interpreted visible geologic features with a rock collection, large color transparencies, paintings, and photographs. Interpretive panels salvaged from the 1959 Oregon Centennial Exposition in Portland were displayed in the lobby of the Administration Building.

New plastic plant labels were used to identify plants in Rim Village and along the Garfield Peak, Discovery Point, and Castle Crest Wildflower Garden trails. A mimeographed guide to the Castle Garden trail was introduced in August and used by some 2,370 visitors.

The park naturalists continued to conduct a variety of guided tours. Daily nature walks, each averaging 25 visitors and 2½-3 hours in length, were conducted each morning and were attended by some 1,659 persons. The rim bus trip which had been conducted by a naturalist during the

1957, 1958, and 1959 seasons was dropped from the interpretive program because of the questionable nature of the activity as a part of the interpretive program, the limited contacts, and the shortage of manpower. Naturalists conducted morning and afternoon launch trips around Crater Lake that were attended by 1,783 persons.

Naturalist talks were attended by 51,177 visitors. Thirty-minute slide-illustrated talks at the lodge followed twenty minutes of variety entertainment presented by concession employees. Campfire programs, attended by about one-half of all park campers, were presented each summer evening at the Community House in Rim Village and at the temporary campfire circle in Mazama Campground.

Research continued to be conducted by park naturalists. Field investigations were carried out on the behavioral patterns of the golden-mantled ground squirrel. Field work for a sedimentation study of Crater Lake was conducted and collected samples were analyzed at the University of Minnesota to learn more about the bottom environment of Crater Lake, its history (including old water levels), and post-collapse volcanic activity.[45]

Various studies were conducted at Crater Lake during the 1960s that provided data for inclusion in the park interpretive program. One of the most significant research projects was a comprehensive parkwide survey of archeological resources conducted by a University of Oregon field party headed by Wilbur A. Davis, Assistant Curator of Anthropology at the Museum of Natural History in Eugene. The purpose of the project was to determine the extent of aboriginal occupation and utilization of the park area. Materials recovered during the survey consisted of a few flakes and projectile points, leading to the conclusion that the area was a suboptimal habitat for aboriginal groups dependent upon hunting and gathering subsistence economies.[46]

In addition to NPS-sponsored research Crater Lake increasingly became the focus of university studies in the 1960s and early 1970s.

Examples of such projects included: Carlton Hans Nelson, "Geological Limnology of Crater Lake, Oregon" (unpublished M.S. thesis, University of Minnesota, 1961); Elizabeth Laura Mueller, "Introduction to the Ecology of the Pumice Desert, Crater Lake National Park, Oregon" (unpublished M.S. thesis, Purdue University, 1966); and John Walter Lidstrom, Jr., "A New Model for the Formation of Crater Lake Caldera, Oregon" (unpublished Ph.D. dissertation, Oregon State University, 1972). These scholarly studies contributed to the information data base of the park and to more knowledgeable park interpretive programs.[47]

The Crater Lake Natural History Association continued its efforts in support of the park interpretive program during the 1960s. Profits from the sales of publications, the total of which exceedsd $7,000 for the first time in 1964, were used to publish interpretive literature, sponsor publication of various park books, and purchase items for the park library.[48] Among the most popular publications sponsored by the association in the 1960s were the "Castle Crest Nature Trail" guide booklet, _The Shrubs of Crater Lake_ by Dr. Charles Yocum, and a revision of _Along Crater Lake Roads_ (1953) by Dr. George C. Ruhle.

An interpretive prospectus was approved for Crater Lake in May 1972. The document, developed by Denver Service Center and park personnel, was intended as a guide for the orderly development of an interpretive program in the park by inventorying the park resources, identifying its thematic elements, and recommending appropriate facilities and services through which the message could be communicated to the public. An "interpretive concept" was developed to provide a philosophical framework to govern the direction of the park program:

> An interpretation of Crater Lake National Park should convey more than the known and supposed circumstances of its origin. Although geologic fact and theory are especially compelling when they relate to something of the magnitude of Mount Mazama and Crater Lake, they are unlikely to occupy a visitor's thoughts longer than his encounter with the next natural marvel on his vacation agenda. Striations left by a glacier which grew warm and died 10,000 years ago cannot long hold one's attention

> when he is confronted by the icy spectacle of Mount Rainier. Nor can a long-silent and cool volcanic artifact vie for a visitor's thoughtful consideration when he is standing amidst steaming fumaroles and boiling mudpots.
>
> Certainly, interpretation should lead to a better understanding of the geologic forces of volcanism and mountain building, and lend meaning to the pure beauty of Crater Lake. But the real value of this story is its commentary on the mechanisms of change. The significance of the changes that sired Crater Lake thousands of years ago are timely and relevant to the present. Interpretation should contribute to an awareness of how, if we do not learn to understand and guide the forces of change which we are capable of perpetrating, we may be engulfed by great upheavals in our world and our lives, as surely and swiftly as were 17 cubic miles of this ancient mountain.
>
> If interpretation is approached in this way--if the skeletal components of fact and theory are skillfully articulated, and firmly bonded by a relevant concept--a more lasting and meaningful response to the Crater Lake experience will result.

According to the prospectus the park interpretive program was to accomplish three objectives. The goals were to (1) provide information and orientation services; (2) facilitate the physical interaction of the visitor with the environment; and (3) foster the intellectual involvement of the visitor by providing those facilities and services necessary to meaningfully interpret the natural values of the park. To realize these goals, major program objectives were proposed to include the following:

- Provide information and directional assistance necessary for the safe and enjoyable use of park resources.
- Lead visitors to the best possible vantage points from which they may view the lake and its surroundings, yet offer nothing that will compete for attention.
- Reveal the story of Crater Lake's origin, and introduce visitors to the agencies of natural change that were--and still are--at work here, and, by inference, everywhere. Interpretation should emphasize that change is a constant and universal quality of the natural world.
- Encourage inquiry about fundamental meanings and relationships, and foster informed concern about environmental quality. Interpretation should depict man as the powerful agent of change that he has become.

- Develop imaginative and relevant approaches to interpretation that will leave the visitor with lasting impressions.

The prospectus identified the principal theme elements of the park. While the principal goal of the interpretive program was to relate the specific facts about Crater Lake to the general theme of change--and man's role in the process--the story elements were basically geologic. Interpretation must therefore build toward that concept by contributing to the visitor's understanding of the geologic forces that built and destroyed Mount Mazama. Major theme or subject matter areas to be included were:

- The pre-Mazama period--the stage setting for the uplift of the Cascade Range.
- The building of Mount Mazama--its continuous growth and alteration by volcanic activity and glaciation.
- The formation of the caldera--intensified activity and the collapse of the summit.
- The post-collapse period--residual volcanic activity and the formation of the lake.
- The present--continuing alterations by wind, and water, and man.

Interpretation should be concerned with the idea of geologic effects on the environment, emphasizing the emerging role of man as he affected the geology. Attention should be focused on the uncommon purity and clarity of Crater Lake and the circumstances that had contributed to those qualities.

The prospectus contained a number of interpretive proposals that were concentrated around and near the rim because the lake was the exclusive focal point of interest in the park. Relatively few time-consuming activities were proposed, predicated on the fact that Crater Lake was a predominantly day-use park with 60 percent of the visitors staying less than 4 hours and 20 percent remaining for only 4 to 8 hours.

The highest priority for interpretive development within the park was assigned to the long-planned and still unrealized rim visitor center on the south rim in the vicinity of the Exhibit Building. The visitor center, according to the prospectus, was to be a low-profile, all-season structure designed to accommodate large numbers of visitors and to make the Sinnott Memorial an extension of the structure by means of a ramp or stairs. The visitor center would be the focal point of interpretive orientation and development within the park, containing a built-in information desk/sales area, a large relief model of the park, and exhibits and pictorial material relating to the aesthetic values of the park. It was to contain a 250-seat auditorium for showing orientation films and slide programs. Renovation of the Sinnott Memorial was recommended for use as the prime location for interpreting the overall geologic history of Crater Lake on a year-round basis with emphasis on personal contact interpretation.

Rim Drive, according to the prospectus, was to be interpreted by thematically related wayside exhibits. At the time there were approximately 20 signs and/or exhibits, including those on the Watchman Parapet, located at various points around Rim Drive. It was recommended that the number be reduced to fifteen and be focused on a unifying theme. Among the sites selected for such exhibits were Cloudcap, Kerr Notch, Sun Notch, Wineglass, and Discovery Point. In addition to roadside interpretive devices, the prospectus recommended development of a taped tour system for Rim Drive. Interpretation at the Watchman Parapet was to emphasize personal contact by an onsite interpreter, supplemented by several exhibits mounted at low levels around the parapet. A modest, unmanned interpretive shelter and wayside exhibit was to be located near the trailhead at Cleetwood Cove.

At the time there were 21 wayside exhibits or signs other than those on Rim Drive. Two were located on the south entrance road, one each on the north and west entrance roads, one at the Pinnacles overlook, and sixteen on the 4-mile Grayback motor-nature road from Vidae Falls to Lost Creek Campground that had been opened in 1969. The prospectus recommended that these exhibits be reviewed with special attention to thematic unity. The Grayback road exhibits, in particular, were to redesigned around the theme of "Evolution of a Landscape."

The prospectus proposed little change in trailside interpretation other than revision of signs and leaflets for uniform thematic cohesiveness. The existing trails most heavily used by visitors were short trails to viewpoints on the rim. Three trails were used for regularly scheduled guided walks--Discovery Point, Garfield Peak, and Annie Creek Canyon. There were three self-guiding trails--Castle Crest, Godfrey Glen, and Grotto Cove. In addition the Watchman Trail was heavily used and to a lesser extent so was the Mount Scott Trail. The Cleetwood Trail was used primarily by those visitors taking the guided launch trip. The Pacific Crest Trail, established by Congress in 1968, extended the north-south length of the park as part of its traverse from Canada to Mexico.

The prospectus recommended other interpretive activities, many of which were quickly implemented. These included guided tours along abandoned fire roads, off-trail "explorer" or "discovery hikes," early morning, evening, and moonlight star walks, winter snowshoe hikes, and continued campfire programs in the large amphitheater at Mazama Campground as well as new programs in the projected amphitheater at South Campground and anticipated campfire circle at Lost Creek Campground.

The prospectus recommended additional staffing for the interpretive program. At the time the Chief of Interpretation and Resource Management supervised the program with the aid of one permanent interpretive technician and seasonal personnel. While not expressly mandated in the prospectus, the ensuing years would witness a shift from hiring older scholarly seasonal personnel to employing younger, less-skilled college students for interpretive work. There was also need for a permanent supervisory interpreter and a park ranger (interpretive specialist).[49]

Increasing interest by the academic community in national park issues in the Pacific Northwest led to a National Park Service Cooperative Park Studies Unit being established at Oregon State University in 1975. The unit was located in the College of Forestry with additional office space and laboratory facilities provided under a cooperative agreement by the Forestry Sciences Laboratory of the U.S. Forest Service's Pacific Northwest Forest and Range Experiment Station. The purpose of the unit was three-fold: (1) to conduct original research on topics of importance to the management of natural and cultural resources; (2) to encourage and facilitate scientific research in national parks in the Pacific Northwest Region; and (3) to disseminate research results within the management system of the National Park Service. During the next decade a variety of Crater Lake research projects would emanate from this unit.[50]

During the 1970s various projects were undertaken to improve the professionalism of the Crater Lake interpretive program. An example of such efforts was development of a Collection Management Plan by the Division of Museum Services of Harpers Ferry Center in 1977. The report recommended changes in the storage of museum collections to enhance the protection and utilization of specimens for the interpretive program. The park collections consisted of:

Geological Series--10 minerals and 400 rocks.

Botanical Series--2,500-3,000 specimens of vascular plants; 750-1,000 specimens of bryophytes and lichens; 800-1,000 specimens of algae and fungi; and 40 species of slime molds.

Zoological Series--225 study skins of birds and 12 nests; 190 study or cased skins of mammals; 65-70 skulls and related items; 280 cold-blooded vertebrates in alcohol; 20 Cornell drawers of mounted insects.

History Series--40 photographs; 10-12 paintings and water colors; a few documents and artifacts.[51]

Historical themes traditionally had received secondary attention in the park's overall interpretive program. To rectify this imbalance an *Historical Studies Plan* for the park was developed in 1979 by Vernon C. Tancil, Regional Historian of the NPS Pacific Northwest Office. The plan provided an analysis of Crater Lake's historic resources and research needs around five principal themes in the park's history. The five themes were identified as being (1) Great Plains Indians; (2) Discovery and Exploration; (3) Park Administration; (4) Visitor Use; and (5) Conservation. The plan included recommendations for park research including an historic resource study (completed in 1984), an administrative history, an historic structure preservation guide for Crater Lake Lodge, and a conservation study.[52]

The aforementioned interpretive prospectus was revised and updated by a new document prepared by the Harpers Ferry Center in May 1980. The objective of the new plan was to provide "a quality experience for short stay day users while providing some in-depth experiences for those with more time." The revised prospectus identified two levels of interpretive involvement which should be available to park visitors:

> . . . At the primary level is the purely sensory response to the size and beauty of the lake and its setting. To contribute to the atmosphere and mood, the landscape should be as natural and free of man-made facilities as possible. At this level, information and orientation is necessary, with easy access provided to various viewing points.
>
> At the secondary level, interpretation will be provided for those visitors who become inquisitive about the lake's creation. At the conceptual level, the interconnection, evolution, and protection of natural systems is the underlying theme of all interpretive programs.

With these objectives in mind the prospectus recommended updated proposals for interpretation at Rim Village and along Rim Drive and to a lesser extent at Cleetwood Cove, the Watchman, and park headquarters in Munson Valley.[53]

Since early 1987 a new interpretive facility has been operated in the rehabilitated Ranger Dormitory now named the Steel Center. Current park planning contemplates development of a new interpretive facility at the rim plus an alternative for developing exhibits on park history on the second floor of the lodge.

APPENDIX A

ORGANIZATION OF THE NATURE GUIDE SERVICE, CRATER LAKE NATIONAL PARK, SEASON 1929

(1)Staff:

Mr. Earl U. Homuth, Acting Park Naturalist.
Mr. Dale Leslie, Ranger-Naturalist.
Mr. F. Lyle Wynd, Assistant.
Miss Mabel Hibbard, Volunteer Assistant.

(2)Duties of the Guide Service:

a. Conduct field trips daily (except Monday).
b. Deliver lectures each evening except Sunday in both the Community House and Lodge.
c. Establish and maintain a museum exhibit in the Community House.
d. Gather and prepare materials for the museum.
e. Maintain an observation station on the Rim, or patrol the Rim for contacts with the public.
f. Develop a nature trail westward along the Rim (to the proposed site of the observation station).
g. Maintain a wild flower exhibit or wild flower garden.
h. Prepare, edit and distribute Nature Notes, monthly.
i. Gather data, and write materials for the Manual of Information.

(3)Assignment of duties for the staff.

a. Earl U. Homuth, Acting Park Naturalist.

1. Supervise and carry on the educational activities under the administrative direction of the Superintendent, and the technical supervision of the Chief Naturalist.
2. Alternate with the Ranger-Naturalist in delivery of lectures and conducting field trips.
3. Supervise and assist in maintaining the museum and gathering and preparing material.
4. Selecting and preparing nature trails.
5. Editing and distributing Nature Notes.
6. Assist in preparation of materials for the Manual of Information.
7. Contacts with the public.
8. Prepare notices to post in campgrounds announcing educational service, lectures, etc.
9. Prepare Field Trip notes for use of Nature Guide staff, Park staff, and general public.

b. Dale Leslie, Ranger-Naturalist.

1. Conduct field trips daily (or alternate with Acting Park Naturalists).
2. Deliver a lecture each evening in the Lodge or Community House.
3. Patrol Rim for contacts with the public for general information.
4. Prepare two articles for each issue of Nature Notes.
5. Gather and prepare specimens for the Museum (especially geologic material).
6. Prepare trail signs and other mechanical devices for nature trails, etc.

c. F. Lyle Wynd, Assistant.

1. Research in preparing materials for the Manual of Information.
2. Preparation of exhibits for the Museum.
3. Prepare articles for each issue of Nature Notes.
4. Deliver lectures, conduct field trips, and make general contacts with the public as directed by the Acting Park Naturalist.

d. Miss Mabel Hibbard, Volunteer Assistant.

1. In active charge of the museum.
2. Maintain cut flower collection.
3. Maintain information bureau in Community House.
4. Sale and distribution of Park publications.
5. Write nature notes.
6. Conduct special field trips.

(4)Schedule of Operations.

a. General Preparations.
During the first days of the season the museum will be organized with materials available; a self guiding trail will be established westward along the rim, the observation station will be developed; notices of the Educational service will be posted; materials will be gathered for the first issue of Nature Notes, and the staff will be organized for the season activity.

b. Current Educational Service.
This will follow approximately the following schedule:

	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
1. Field Trips.	8 a.m.	None	8 a.m. Homuth and Leslie alternating.				
2. Lectures: Hotel Com. House	 None None	 8:30 p.m. 8 p.m. Homuth and Leslie alternating.					
3. Museum, Com. House, and General Information	8 a.m. to 6 p.m. Homuth or Leslie	8 a.m. to 6 p.m. Miss Mable Hibbard					
4. Rim Duty for General Contacts and Information	1-5 p.m. Homuth and Leslie alternating.						
5. Museum Collection Preparation, etc.		1-5 p.m. Alternating with Rim duty, Homuth or Leslie					
6. Wild Flower Display		1-5 p.m. Alternating with Field Trips, Homuth or Leslie in cooperation with Miss Hibbard.					
7. Nature Notes	Staff, as materials present. To be issued at first of each month.						
8. Research, Preparation of Manual of Information, Museum Materials, etc.	Wynd, under direction of Acting Park Naturalist. (Routine duties as necessary.)						
9. Records, Reports, Notices, etc.			Homuth when due.				
10. Nature Trails, Exhibits in Place		Staff. Continuous service. Preparation as necessary.					

RG 79, Region IV, Central Classified Files, 1923-42, Box 9, Folder No. 000, General, FRC, San Bruno.

APPENDIX B

LIST OF INTERPRETIVE SERVICES AT CRATER LAKE NATIONAL PARK
1956

A. Informational Outlets:
   1. Administration Building - All year daily, Ranger and Naturalist
   2. Medford Office - All year, week days
   3. Annie Springs Entrance Station - 6 months daily, 6 months weekends
   4. Information Building (Rim) Naturalist on duty daily-Summer
   5. North Entrance Station - daily, Summer
   6. Sinnott Memorial (Rim) Naturalist on duty daily, Summer
   7. Warming Hut (Rim), Winter Season - concession employees (pamphlets)
   8. Patrol and traffic rangers - daily, Summer. Winter seasons as needed

For those visitors who are unable to view the lake because of weather conditions, there is displayed in the Administration Building lobby a 30" x 40" illuminated color transparency of the lake. It is an outstanding exhibit, serving a very good purpose.

B. Museum Facilities:
   1. Sinnott Memorial (Rim) - Exhibits, lectures - daily, Summer. Naturalist on duty
   2. Information Building (Rim) - Exhibits, publications. Naturalist on duty daily in Summer. This building will be razed upon completion of the Visitor's Center.

C. Conducted Trips:
   1. Boat Trip - Daily in Summer
   2. Guided Field Trip - Daily in Summer
   3. Special Trips and Services to Groups - as needed.

D. Lectures:
   1. Sinnott Memorial (Rim) - Four lectures daily, Summer
   2. Lodge (Rim) - Evening lecture daily, Summer
   3. Community Building (Rim) - Evening programs daily, Summer. This building will be razed upon completion of the Visitor's Center.

E. Nature Trails (Marked with botanical labels):
   1. Castle Crest Gardens
   2. Lake Trail
   3. Garfield Peak Trail
   4. Sunset Trail

F. Publications-Sales:
1. Park Headquarters - Daily, all year
2. Information Building (Rim) - Daily, Summer

G. Activities Outside Park:
Talks to school groups, service groups, etc. are arranged year round by qualified personnel.

H. Workshop Facilities (Administration Building):
1. An extensive herbarium
2. Library (general - natural and human history)
3. A fair collection of preserved specimens and study skins of birds and animals
4. Kodachrome library
5. Photographic library
6. Laboratory
7. A fully equipped darkroom

All of these facilities are made available to interested individuals and organizations throughout the year.

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EPILOGUE

The administrative history of Crater Lake National Park is a case study of the methods and practices used to manage one of the most scenic areas in the United States. As a result of the vision and determination of William G. Steel, Crater Lake was removed from the public domain and made a part of the Cascade Range Forest Reserve in 1893 to be managed by the General Land Office of the Department of the Interior.

In 1902 Crater Lake was established as the sixth national park in the United States. The establishing act provided that the park was to be an area "dedicated and set apart forever as a public park or pleasure ground for the benefit of the people of the United States." The act required that measures be taken to preserve the scenery, timber, wildlife, and other natural features of the park for the use of "scientists, excursionists, and pleasure seekers." Thus, the national park designation reflected in part changing American attitudes toward nature, the old pioneering emphasis on rapid expluitation of seemingly inexhaustible resources at last giving way, among some influential Americans, to an awakened awareness of the necessity of preserving the beauties of nature.

Since 1902 efforts have been made to achieve the purposes stated in the establishing act for Crater Lake National Park. During the period from 1902 to 1916 the park was administered by various offices in the Department of the Interior, and under the direct supervision of Superintendents William F. Arant and William G. Steel its formative stages of development were commenced. After the National Park Service was established in 1916, Crater Lake soon became known as one of the "crown jewels" of the embryonic National Park System. During the past seven decades the Park Service has initiated operational, planning, and construction programs designed to achieve the original purposes of the park.

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INTERVIEWS

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Telephone interview with Einar L. Johnson, Cuyahoga Valley National Recreation Area, Ohio, June 24, 1987.

Telephone interview with Ernest Borgman, Klamath Falls, Oregon, March 26, 1987.

Telephone interview with Mrs. F. Lyle Wynd, Eugene, Oregon, June 23, 1987.

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These interviews provided background information for analysis of trends in park management and operations.

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